PACIFIC FISHERMAN

1903

50

For Half a Century
the Record and "Bible"
of Pacific Fisheries

1953

YEARBOOK NUMBER

REGISTERED PROPRIETARY BRANDS

"Blossomtime"
"Columbia Rose"
"Dice"
"Dixie Belle"
"Far North"
"McGovern's Best"
"Norge"
"Princess Pat"
"Red Beauty"*
"Red Rider"
"Sea Beauty"
"Sea Club"
"Sea Flyer"
"Sea Lad"
"Sea Legion"
"Sea Mac"
"Sea North"
"Ski"
"Storm"

* Trade Mark

MEMBERS:

National Food Brokers Association
National Fisheries Institute, Inc.
Association of Pacific Fisheries

REFERENCE:

The National Bank of Commerce of Seattle

Reliable Service...

Dependable Quality!

McGOVERN & McGOVERN — SERVICE AND QUALITY — SEATTLE, U.S.A.

CANNED SALMON

and other Aquatic Products

To the Packer:

we offer a ready outlet, having an efficient nationwide sales organization through which we keep in daily touch with the trade. Our sales service is augmented by regular personal visits to the markets of the nation by trained personnel.

To Our Associate Brokers:

we offer complete, reliable, up-to-the-minute postings, using the wires freely. We are in daily intimate touch with the progress of seasonal production and the trend of the market.

To the Buyer:

we offer the benefit of expert knowledge gained after years of experience in selecting stocks of all grades and sizes of ALASKA, PUGET SOUND and COLUMBIA RIVER Canned Salmon for the most discriminating trade, having sources of supply from all districts.

McGovern and McGovern

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PACIFIC FISHERMAN YEARBOOK NUMBER 1953

Volume 51 **Number 2**

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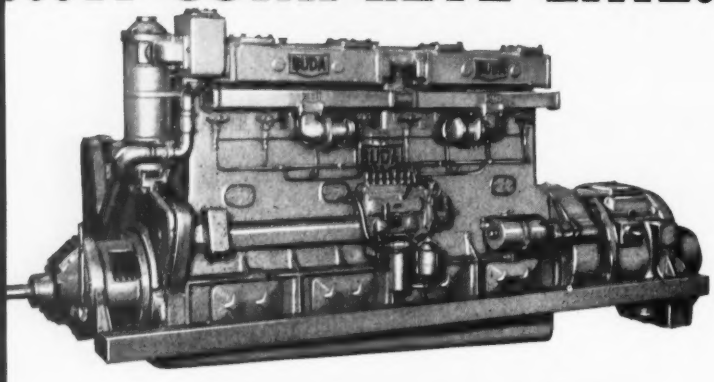
MARINE DIESELS

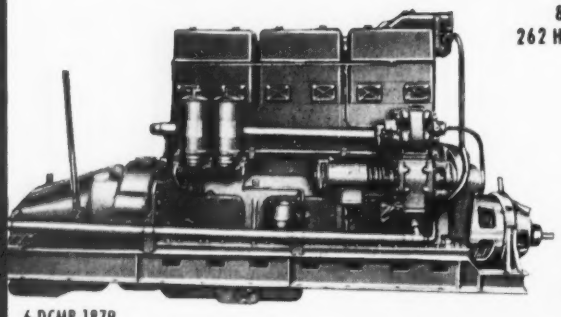
...A COMPLETE LINE...

SERVICE ROUND THE WORLD



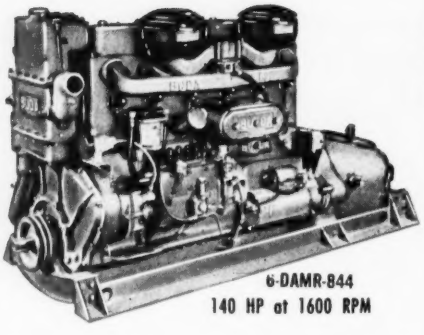
8-DCMR-2505
262 HP at 1000 RPM

Install a powerful, rugged Buda Marine Diesel in your boat and get the same money-making economy and dependability that makes Buda Marine Diesels the first choice of owners and operators all over the world. Remember—fast, easy starting, smooth, quiet, trouble-free operation and maximum fuel economy are guaranteed when a Buda Diesel powers *your* boat. Your nearby Buda Marine Distributor will be glad to show you how Buda Diesels can increase your profits the first day they go to work for you. Write for full details and the name of your Distributor. The Buda Company, Harvey, Illinois.



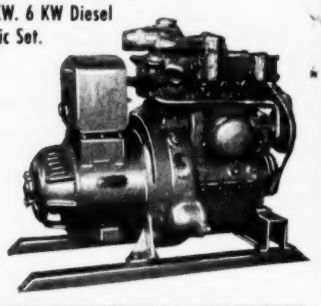
6-DCMR-1879
6 HP at 1000 RPM

DEPENDABLE POWER FOR EVERY NEED



6-DAMR-844
140 HP at 1600 RPM

BUDA auxiliary generator sets in sizes from 2½ to 250 KW. 6 KW Diesel Electric Set.

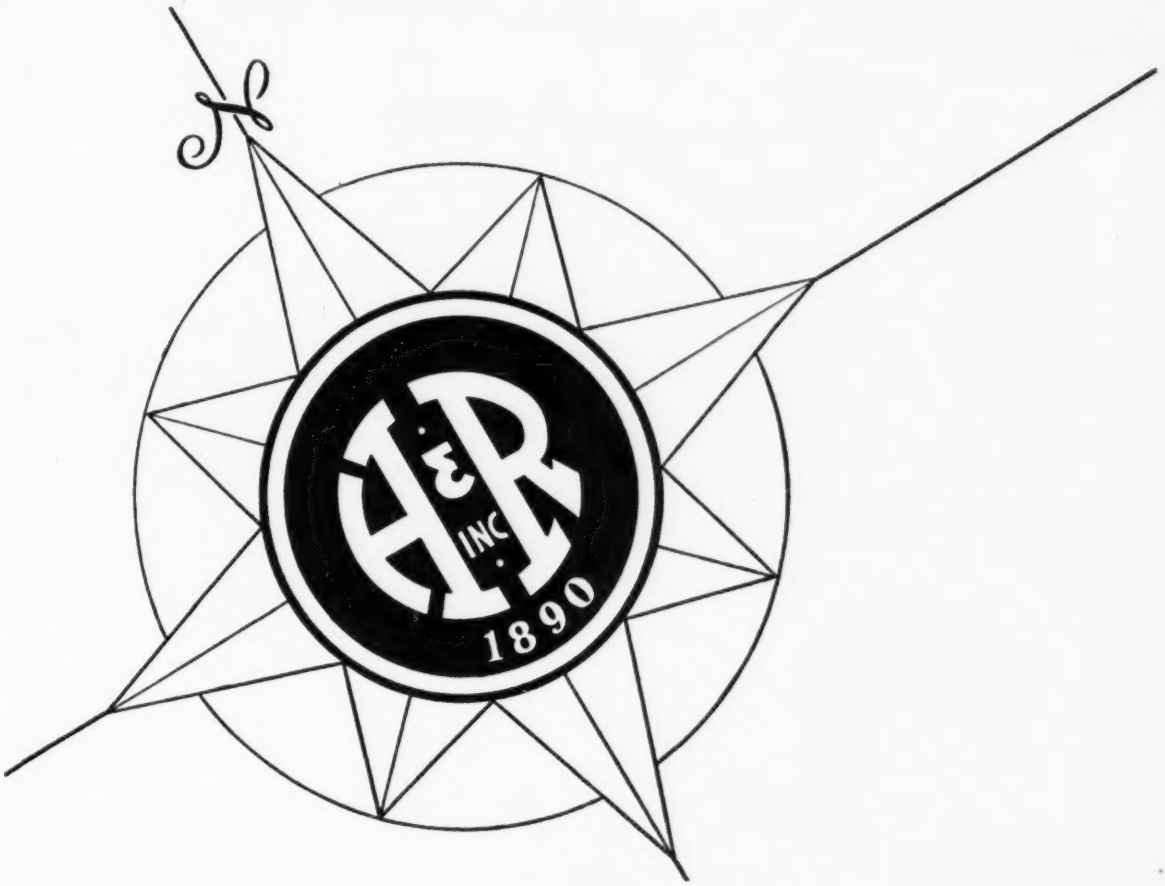


MODEL	NO. CYL.	BORE & STROKE	CU. IN. DISPL.	TUGS, FISH BOATS, COMMERCIAL CRAFT	MAX HP @ RPM
2-BDMR-77	2	3 7/16 x 4 1/8	77	15 @ 1800	17 @ 2000
4-BDMR-153	4	3 7/16 x 4 1/8	153	30 @ 2000	40 @ 2400
4-BDMR-182	4	3 3/4 x 4 1/8	182	35 @ 2000	45 @ 2400
6-BDMR-230	6	3 7/16 x 4 1/8	230	45 @ 2000	60 @ 2400
6-DAMR-273	6	3 3/4 x 4 1/8	273	57 @ 2000	75 @ 2400
6-DTMR-317	6	3 3/8 x 5 1/8	317	72 @ 2000	90 @ 2400
6-DTMR-468	6	4 1/4 x 5 1/2	468	92 @ 1800	114 @ 2000
6-DAMR-844	6	5 1/4 x 6 1/2	844	165 @ 1800	215 @ 2000
6-DCSMR-844*	6	5 1/4 x 6 1/2	844	200 @ 1800	280 @ 2000
8-DAMR-1125	8	5 1/4 x 6 1/2	1125	206 @ 1800	287 @ 2000
8-DAMR-1125*	8	5 1/4 x 6 1/2	1125	240 @ 1800	350 @ 2000
6-DCMR-1879	6	6 3/4 x 8 3/4	1879	186 @ 1000	257 @ 1200
6-DCSMR-1879*	6	6 3/4 x 8 3/4	1879	232 @ 1000	330 @ 1200
8-DCMR-2505	8	6 3/4 x 8 3/4	2505	278 @ 1100	388 @ 1300
8DCSMR-2505*	8	6 3/4 x 8 3/4	2505	368 @ 1100	516 @ 1300

* Supercharged

BM 10

BUDA ...a Power-full name in Engines



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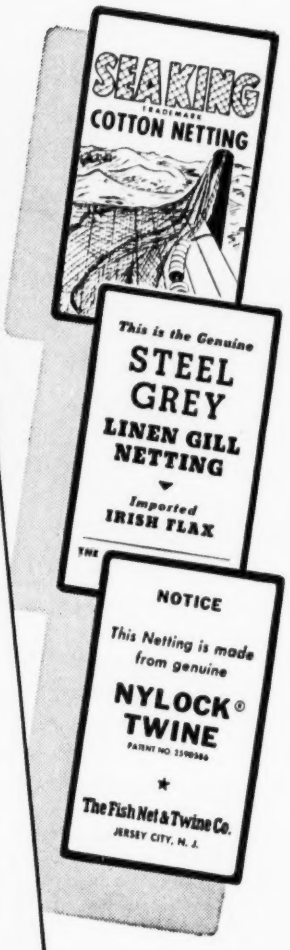

25 YEARS AGO...

We ran this page in the trade papers, as shown above, with the exception of photographs which have been brought up to date.

Three of the original FISHNET family are still "on the job" and the famous STEEL GREY Linen Gill Netting and SEA KING COTTON Pound and Gill Netting can still be had "at the old stand". Now we have a new product—NYLON GILL Netting, made from Du Pont Nylon, that was unknown 25 years ago. We always keep up to date.

Today, as then, "we are proud to be identified with a product which never has to be apologized for".

• STOCKS CARRIED IN RICHMOND, VA., MILWAUKEE, WISC., SEATTLE, WASH., JACKSONVILLE, FLA., CUT OFF. LA. •

Serving the Fishermen's Needs for Over 100 Years

P&H Diesel Engines

(2-CYCLE)

Can you do this with your diesels?

Within just 40 minutes you can remove a cylinder assembly — replace it with a complete new one — and have your P&H Diesel back in service.

No other diesel offers you such amazing speed and simplicity — such protection against costly lay-ups. Think what it can mean to you in time and cost savings — in simpler parts stocks. Where necessary, you can take an assembly from one engine to another . . . good reason in itself for standardizing on P&H Diesels.

This is only one of many advantages you'll find in this advanced line of P&H Diesels. Ask your nearest P&H Diesel representative for complete facts. Or write us.

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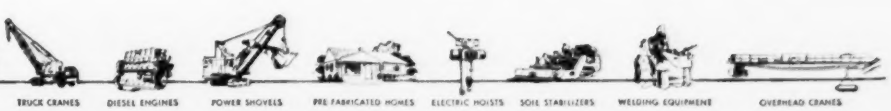
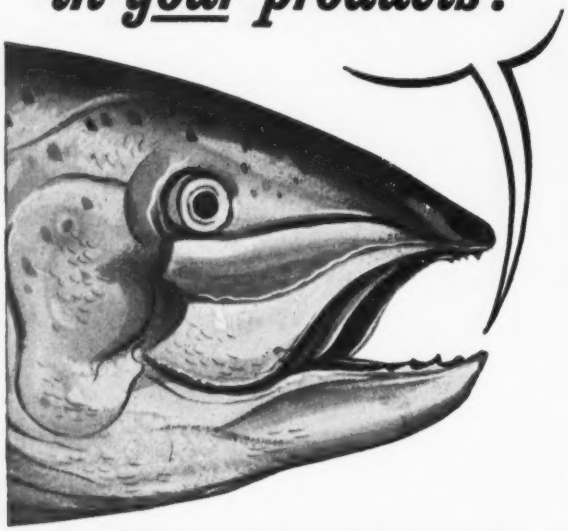
HARNISCHFEGER CORPORATION
CRYSTAL LAKE, ILLINOIS

the P&H Line



How to guard against "Flavor Fading" in your products!



Use ZEST - the miracle seasoning that intensifies natural food flavors

End gradual "flavor fading" that steals the ocean-fresh flavor of your products . . . robs you of sales every day. Add ZEST to your fish products. ZEST—Staley's pure Monosodium Glutamate adds no flavor, no aroma of its own . . . simply magnifies the true, fresh flavor already present! ZEST requires no formula changes—you use this amazing seasoning just like salt. You simply add magic ZEST crystals before, during or after processing.

ZEST zooms sales as well as flavor!

Fish packers had phenomenal success with ZEST when they told people about it. Once your customers discover the difference ZEST can make in *fresh fish* flavor . . . they buy and keep on buying!

ZEST is packed in 50 and 100-pound drums. Write today for full details and prices.

PRODUCTS FROM CORN AND SOYBEANS — Staley's

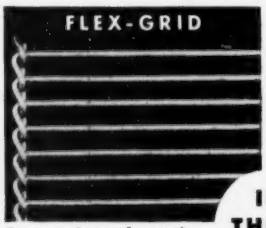
Zest®

Staley's Pure *Monosodium Glutamate*

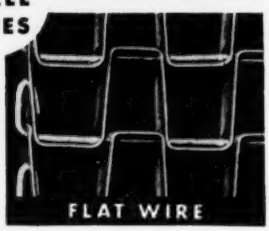
A. E. Staley Mfg. Co.

Dept. PF-53, Decatur, Illinois

CYCLONE MAKES CONVEYOR BELTS



IN THREE TYPES



In a variety of metals, alloys, finishes in sizes and weights to meet the needs of:

- Bakers
- Meat and Seafood Packers
- Fruit and Food Canners
- Fresh Vegetable Processors
- Rubber Products Makers
- Metal Working Plants and Manufacturers of other articles

Our technicians will be glad to work with you to help you select the belt which is best for *your* operation. Call our nearest sales office; or write Cyclone Fence, Dept. J-23, 954 60th Street, Oakland, California, for a free Conveyor Belt Catalog. There is no obligation.

CYCLONE FENCE DEPARTMENT
AMERICAN STEEL & WIRE DIVISION
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USS

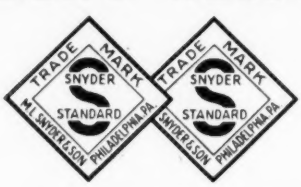
UNITED STATES STEEL

WHEN YOU'RE BUYING

WATERPROOF CLOTHING

IT PAYS TO ASK FOR *"The Original"*

SNYDER'S NEOPRENE



The combination of Du Pont's Neoprene, coated by hand on strong durable fabric AFTER SEWING, plus SNYDER QUALITY, prompts the smart buyer to

ACCEPT NO OTHER BRAND!!!

Try our other products too—
Rubber boats, gloves, aprons.
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Onan MARINE DIESEL ELECTRIC PLANTS

True Marine Features

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Designed for marine use, these Onan water-cooled Diesel Electric Plants are unusually compact with clean design, simplifying installation. Operate economically on a variety of Diesel fuels.

Both the 3KW and 5KW models in all standard A.C. voltages; 32-volt 3KW battery charger. Whatever the electrical needs of your craft, these new Onan Marine Diesel Electric Plants will serve you better.

ONAN BUILDS ALL FOUR TYPES OF ELECTRIC PLANTS

Water-cooled Diesels

Air-cooled Diesels

Water-cooled gasoline-powered

Air-cooled gasoline-powered

Onan ELECTRIC PLANTS

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744 North 34th, Seattle, Washington

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"Johnson's Best"

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JOHNSON'S BEST SEATTLE, WASH.

1. KEEPS YOU DRY . . .

Coated with REAL LIQUID NEOPRENE LATEX, both inside and outside, after sewing. It is thoroughly waterproof. The seams are **tight.**

2. "TUFF STUFF" . . .

GOOD NEOPRENE CLOTHING will outwear any other kind of waterproof garment. It resists snagging. The rugged, double-stitched seams, coated **after** sewing, cannot pull apart—and it wears and wears and wears.

3. YOU CAN'T HURT OUR NEOPRENE . . .

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Our LIQUID NEOPRENE LATEX is hand-brushed on and into the fabric, thus the coating and fabric become one—it will not peel, stick, or crack.

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"JOHNSON'S BEST" Brand, while tough and durable, is made with sturdy, flexible fabric. Patterns used are roomy and comfortable. It's a pleasure to wear "JOHNSON'S BEST".

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When you wear "JOHNSON'S BEST", you know you will not be caught without adequate protection, whether miles at sea or deep in the woods.

"JOHNSON'S BEST" NEOPRENE CLOTHING is made in various styles of garments, i.e. Jackets, Pants, Hats, ¾ or Full-length Coats, Barvels, Aprons, etc. Three colors — yellow, black and green. Two weights are made; heavyweight for most purposes, medium for less severe service. Either weight gives you the best that money can buy. Both weights at new low prices.

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Factory and Office
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Made on the West Coast—for the West Coast Since 1870

. . . the men, the ships and the sea

have worked . . . and frequently battled . . . to bring to the tables of the World such delicacies as the bountiful sea can provide.

And, these delicacies are always being improved. As leaders in production techniques and marketing methods through constant research, San Juan Fishing and Packing Company sets the standard of quality for fish products everywhere.

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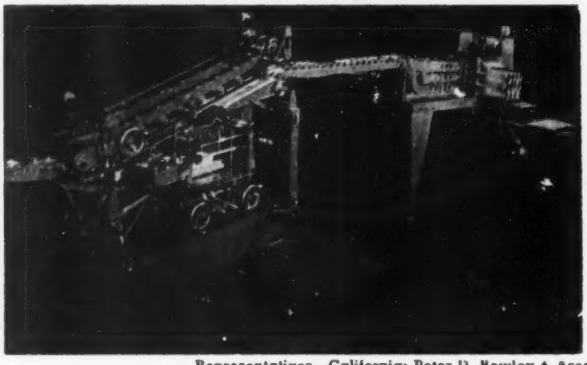
OVERCOME HIGH HANDLING COSTS

Drains and Inverts Horizontal Retort Trays and aligns containers in single or double line for next operation.



At left, CRCO-New Way Model E Labeling Machine close-coupled to Model A Caser—designed to reduce handling costs. Will handle all types of cylindrical containers.

SEND FOR BULLETIN No. 1465 JUST OUT

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COMPANY OF PENNSYLVANIA
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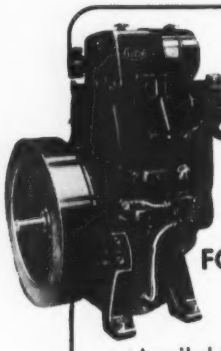
FOR EVERY POWER NEED



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"FR" DIESELS
FOR MARINE SERVICE

- Available in 1, 2, 3, 4, and 6 Cylinder Models
- Horsepower Ratings 8-54
- Generating Capacity 3-40 KW

DEALERS WANTED
Some good territories are still open. If you have sales and service facilities for marine work, write...

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THE **NATIONAL SUPPLY** COMPANY
SPRINGFIELD, OHIO

Distributors of Lister *Diesels in the U. S. A.*

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APEX TROLLING TUBING AND ALL TYPES OF RUBBER PRODUCTS FOR THE FISHING AND CANNING INDUSTRIES

HOSE — Steam, water, fire, exhaust, gasoline, suction, etc.

RED SHEET packing, retort door packing, pump diaphragms.

Manufactured by

The AMERICAN RUBBER MFG. CO.
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OREGON MARINE SUPPLY CO.
Astoria
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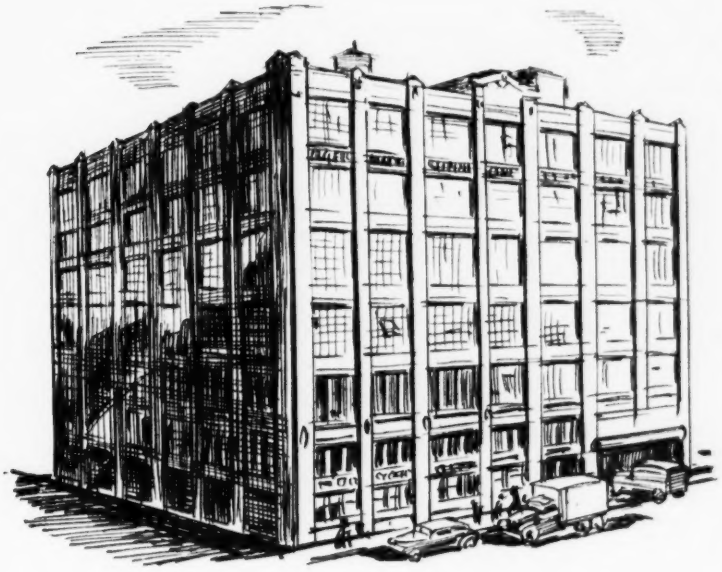
Through 56 years
of fisheries development

PACIFIC MARINE

has kept pace.....



...AS ONE OF THE LARGEST MARINE SUPPLY ORGANIZATIONS

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for Top Notch
Operations–

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Top quality, double knot, Longer lasting. Fisherman's favorite for over 100 years.

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Best netting that can be bought. Fishes better and lasts longer.

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Purse lines to pot warp—extra life, strength and safety. Try Plymouth "Ship" brand.

BENDIX DEPTH RECORDERS & INDICATORS

There is a Bendix for every job. Five models to choose from. Select the one designed for your work.

EDWARDS TRAP NETTING & WIRE

Trap wire of uniform size, fully galvanized. Wire Rope built for fishermen who want the best.

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Registers to 60 fathoms. Accurate, compact, built for better fishing.

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Fire extinguishing systems for boats and shore plants. Complete protection at moderate cost.

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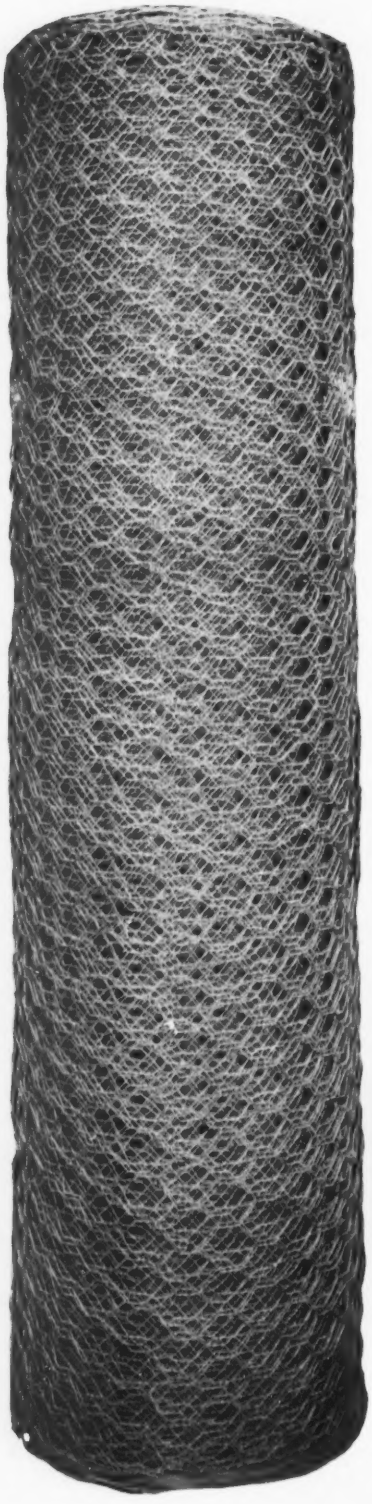
EDWARDS



WIRE FISH TRAP NETTING

MADE IN ALASKA

By EDWARDS-ALASKA STEEL PRODUCTS, INC.

Ketchikan, Alaska

●

WIRE ROPE

MADE ON THE COAST

By EDWARDS WIRE ROPE

South San Francisco, California

●

Distributed to the Salmon Packers by

PACIFIC MARINE SUPPLY CO.

SEATTLE, WASHINGTON

●

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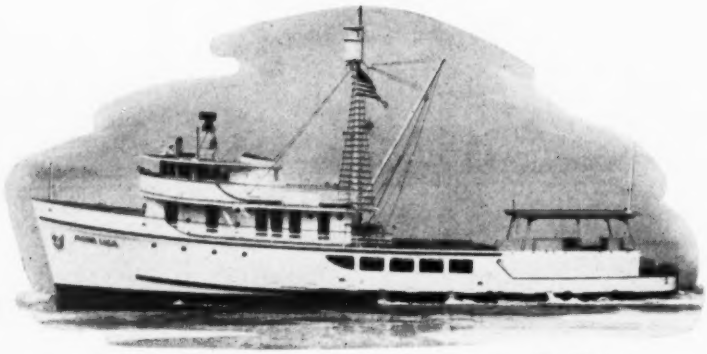
ADAMS NET & TWINE COMPANY 701-3 N. SECOND ST. • ST. LOUIS, MO.

Keeps You Fishing



118' Tuna Clipper "Mona Lisa" Is Cutless Bearing Equipped

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If you fish for a living you know the importance of dependable propeller shaft bearings. The kind that gives years of trouble-free, *quiet* operation. The kind that saves shafts and keeps boats out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing—the bearing fishermen depend on to keep them fishing.

Large west coast stocks of popular sizes. Factory stocks to 10-inch shaft sizes available overnight by air.

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PROPELLER SHAFT

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There's never been a waterproof built that affords the protection that the new **TOWER'S FISH BRAND** *Latex* **NEOPRENE** garments gives fishermen. In addition to meeting the exacting needs of commercial fishermen for solid comfort, freedom of movement and durability, **TOWER'S** *Latex* **NEOPRENE** gives fishermen who also require special protection from oils, greases and ordinary acids that extra resistance and service.

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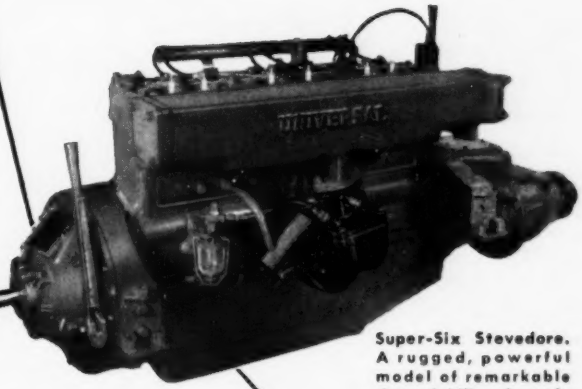
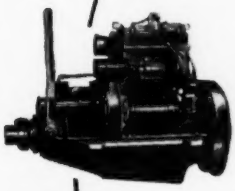
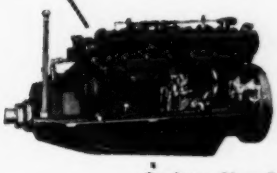


Super-Six Stevedore. A rugged, powerful model of remarkable dependability. Smooth, will idle all day at 400 r.p.m., 130 h.p.

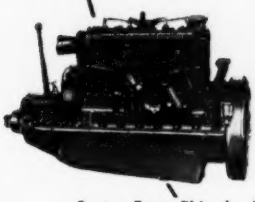
Profit by the famous Dependability of a UNIVERSAL 100% MARINE MOTOR



Blue-Jacket Twin. Always a favorite for small boats because of its real economy and lasting performance. 12 h.p.



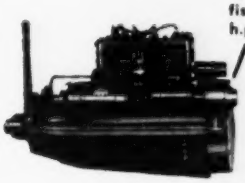
Cruiser Six. For real economy and more years of hard work, this is the model for you. 90 honest h.p.



Super-Four. This husky four of big power is tops in its class. You'll spend less to operate and maintain this 50 h.p. 100% marine motor.

Fisherman. Amazing economy (2 quarts gas an hour) plus unbelievably long life, are the reasons fishermen prefer this 8 h.p. Universal.

Universal
100% MARINE
MOTORS
Above All—*Dependable*



Utility Four. World's most famous, fastest selling 4-cylinder 100% marine motor. Unmatched for dependability. 25 h.p.

If your boat calls for an engine up to 145 horsepower, you can have *true marine power* . . . a Universal. Today, the Universal line includes more models than ever before!

Whatever Universal model you select—from the 145 h.p. Super-Six to the 8 h.p. Fisherman—you *know* you're set for long years of faithful, low-cost service.

You get better idling in a Universal, smoother power over the entire range. There's greater operating economy; less maintenance is required. And there is Universal's exclusive 21-year parts service to keep your motor always performing at peak efficiency.

Yes, you *do* get far more value when you buy a Universal—because these are genuine marine motors—*built for fishing service.*

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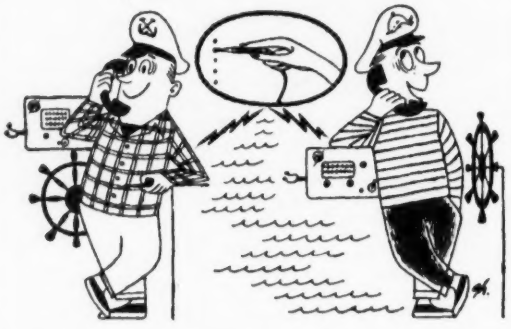

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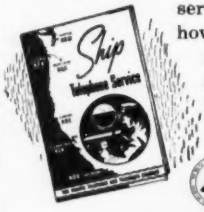

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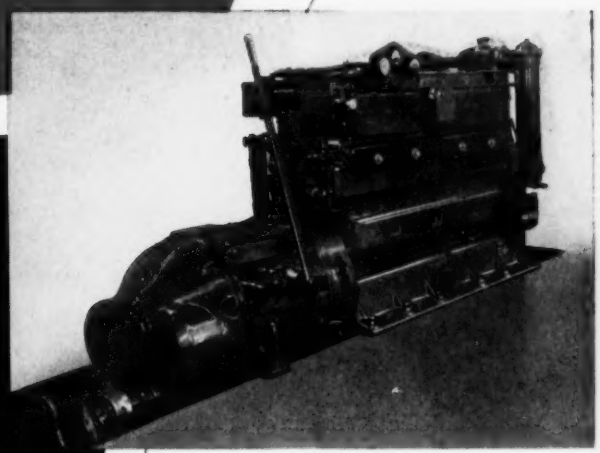
ANOTHER MEMBER OF THE TIME-TESTED LINE OF ATLAS DIESELS



Trim of line as the ships she'll sail in, this engine is a member of the sea-going family of Atlas Diesels which have powered fishing boats and workboats for more than a half century.

ATLAS MODEL 35 MARINE DIESELS CAN BE FURNISHED FOR:

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Write now for bulletin containing detailed specifications and load-speed tables.

Just remember, there's an Atlas or Superior Diesel for every maritime power requirement. Give us general information on your power needs and we'll send full details.

BRIEF SPECIFICATIONS

BORE: 6½" STROKE: 8¼"
R.P.M. 900—1200
Built in 4 and 6 cylinder types

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The large fully machined crankshaft is bedded in base, providing greater service availability than suspended crankshaft.

•

Camshaft assembly readily accessible by removal of panel from control side of engine.

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Fully enclosed—pressure lubricated throughout—full flow filtration.

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Precision main and connecting rod bearings.

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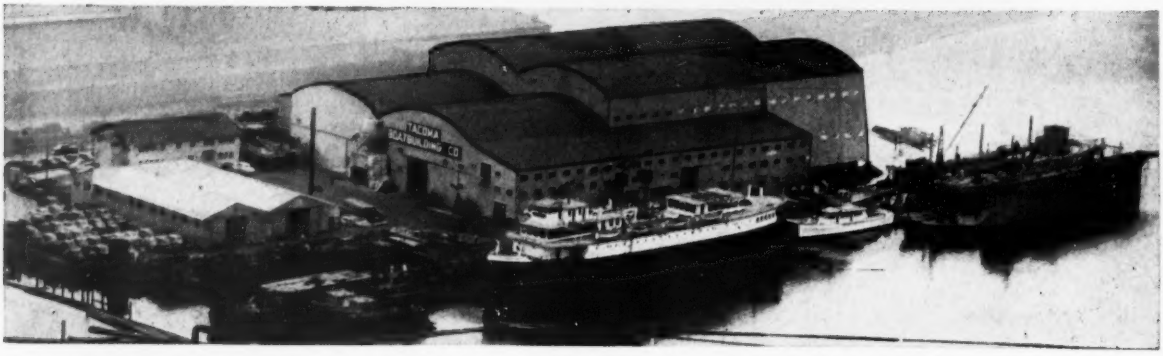

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NORTHERN DANDELION BLOCK Swivel eye, large throat opening small enough for lighter boats —strong enough for the big ones.

NORTHERN CRAB HOIST BLOCK . . . all bronze frame and sheave, replaceable wearing parts.

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  Six Basic Models
  28 Types To Suit Every Need—Simple — Rugged — Dependable. The standard of quality for fishing boats 42 ft. and over.
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  For vessels 45 ft. and up.
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  For salmon, herring, sardine or tuna vessels.

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Designers and Builders of Wood and Steel Commercial and Fishing Vessels Since 1930

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The invention and later improvements to the "IRON CHINK"—the world's only salmon butchering and cleaning machine—made possible the development and expansion of a great enterprise—the Pacific salmon canning industry.

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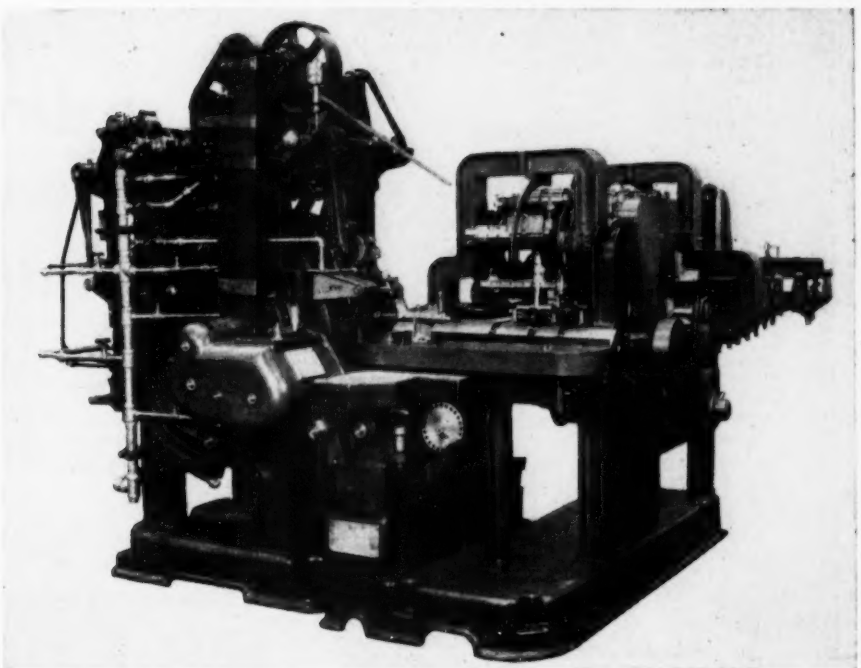
It is with sincere pride that we recall our part in the tremendous growth of this industry—made possible by the "IRON CHINK"—and our own pleasant business relationship with the salmon canners for the past 50 years.

TODAY!

The MODEL K *"IRON CHINK"*



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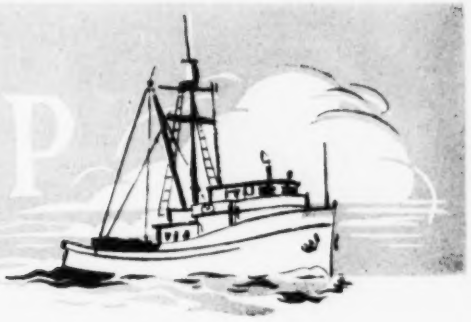

More Fishermen put their Faith in Porterdale Superior Seine Twine than in any other brand.

In almost every field one product attains *Leadership.*

More than any other, this product has earned the confidence and justified the FAITH of those who depend upon it.

More Fishermen put their Faith in Porterdale Superior Seine Twine than in any other brand.

Of equal importance, this Leadership has been *earned* over a period of more than 70 years.

Insist upon Porterdale Superior Seine Twines and fishing quality Ropes for outstanding performance and dependability.

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C. P. Lockie & Co.
Edward Ligoett, Ltd.

FRESH WATER COOLERS "Wixkulers" like this are standard or optional equipment on many boats built in such well-known yards as the J. M. Martinac Shipbuilding Corp. and the Tacoma Boat Building Co. Note Monel shell and fresh water expansion tank. Baffle sheets, too, are Monel to insure high heat exchange rate without weakening, corroding or rusting.

Alaskan fishing boat "Winsome," owned by George English; designed by Wm. M. Garden; built by Lester & Frank Boat Co., Seattle. Just one representative of the many sea-going fishing boats which use a Wixkuler.

How sea water cools the engine...yet never enters the cylinder block

Sea water can never cause trouble in an engine that is cooled by fresh water.

That's why boat owners and operators (and designers and builders, too) go for the Wixkuler to keep sea water in its proper place.

A Monel-shelled Wixkuler installation cools the engine with clean fresh water. Salt sea water cools the fresh.

How can this equipment improve engine performance?

First, because *only* fresh water enters the cylinder block. Engines can operate at higher temperatures and greater efficiencies with no danger that stopped-up water passages (due to salt deposits) or sand, grit or mud can possibly cause damage.

Second, with Monel® for the welded shell, fresh water expansion tank, and baffles, there is nothing to fear from destruction by heat or marine corrosion. Despite high temperatures, Monel *keeps* its strength and resists corrosion.

And now Wixkulers are used to cool engine lubricating oils, too. So, if your commercial fishing boat is a hard-working 41-footer like the "Winsome"... or a 140-foot "queen of the tuna fleet"... or any size in between, consider the Wixkuler. It's easy to install. Eliminates separate expansion tank or reservoir. Permits rapid warm-up. Maintains proper engine temperature regardless of speed.

For further information, write the Wix Cooler Co., 2900 Westlake North, Seattle 9, Wash..

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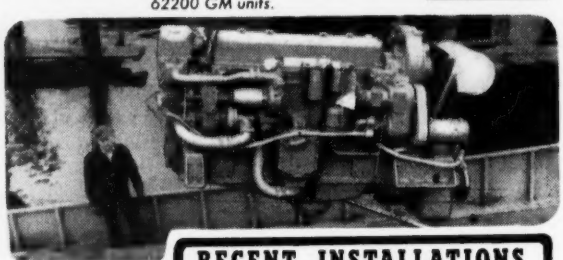
WILBUR SMITH chose GM Diesel PROVEN POWER for the 60-foot towboat "HUSKY" he is building at Rainier, Oregon. Gunderson Bros. furnished three 62200 GM units.



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Brilliant new GM Diesel 51 Series for Marine Application — small and medium craft. Max. 87 h.p. at 3000 RPM. Continuous 54 h.p. at 2200 RPM.

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Compact GM Diesel Power available in Single Units 16 to 275 h. p.; Multiple Units up to 840 h. p.

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WORK BOATS

Hilstrom Shipbuilding, Coos Bay, Ore. One 3071A
Meadow Boat Works, West Linn, Ore. Two 3071A
Al Bernert, Willamette, Ore. One 62200RA ... One 120018
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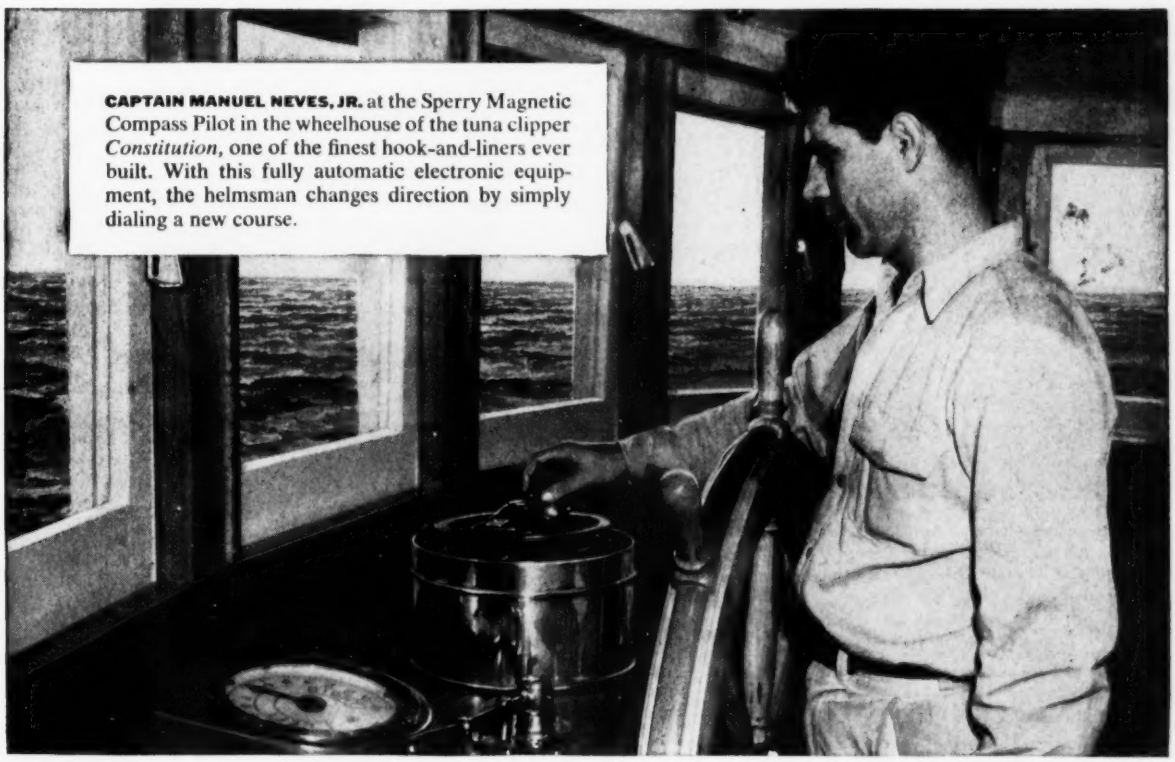
Article Number One of the CONSTITUTION

AMERICA'S GREAT 1952 CLIPPER



CAPTAIN MANUEL NEVES, JR. at the Sperry Magnetic Compass Pilot in the wheelhouse of the tuna clipper *Constitution,* one of the finest hook-and-liners ever built. With this fully automatic electronic equipment, the helmsman changes direction by simply dialing a new course.

JOE S. ROGERS

"Of all the navigational aids to profitable fishing incorporated in the *Constitution,* none is more important to us than the Sperry Magnetic Compass Pilot. I'm recommending it to all my friends," says Mr. Joe S. Rogers, builder and managing owner of the *Constitution,* one of the truly great vessels in tuna clipper history.

Today owners of all types of fishing craft—both new and modernized vessels—are specifying the Sperry Magnetic Compass Pilot for economy and profit. Sperry automatic steering gets a vessel to the fishing grounds and back with a minimum expenditure of time, fuel, and manpower—because it follows *a prescribed course under all sea conditions.*

At the fishing grounds the Sperry Magnetic Compass Pilot is equally valuable. Heading changes are swiftly and easily made, and held automatically. A portable remote controller provides full rudder control outside the wheelhouse. More men are released for fishing while the catch is on, and the skipper can give his personal attention to important fishing operations. This results in bigger hauls and greater profits in a shorter time.

Backed by Sperry's extensive and dependable service, the Magnetic Compass Pilot can be supplied with either an electric steering engine or a hydraulic ram. Our nearest district office will be glad to give you detailed information.

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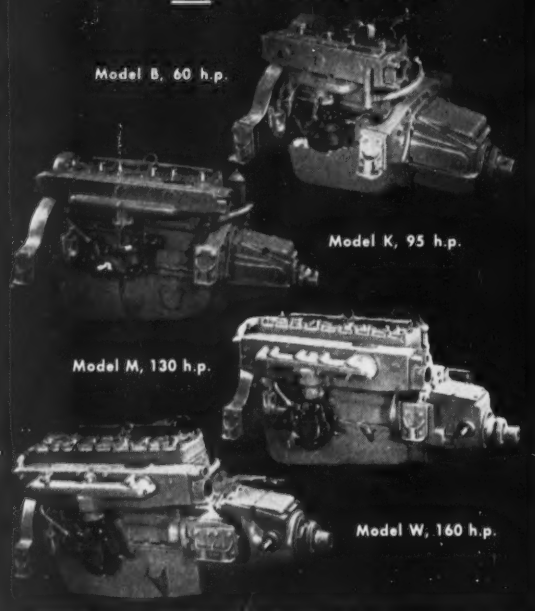
Chris-Craft

WORLD'S BEST BUYS IN MARINE ENGINES

for fishing boats, work boats —for any commercial use!



Horsepower for horsepower, you can't buy a better marine engine for smooth, dependable operation and more years of hard service at low upkeep cost than a compact, power-packed Chris-Craft! Read what this user says:

Vale Marvin

"I've been strictly a sail-boat enthusiast for many years," writes Vale G. Marvin, Brewer, Maine, "so when I asked the Mace and Alonzo Eaton Boat Shop to construct my 29-ft. Sport Fisherman, I left the selection of power to them. They recommended a Chris-Craft 130, and I'm glad they did. For once installed in my new *Wisp*, the engine delivered top horsepower with very reasonable fuel consumption. While fishing along the coast of Maine, I can cruise at 13 knots with two-thirds throttle, which gives me plenty of reserve speed if I need it."

Chris-Craft Marine Engines are available in 60, 95, 105, 120, 130, 131, 145, 158 and 160 h.p. with reduction drives and opposite rotation for most models. See your Chris-Craft Dealer or mail coupon for FREE catalog today! Buy NOW!

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WORLD'S LARGEST BUILDERS OF MOTOR BOATS

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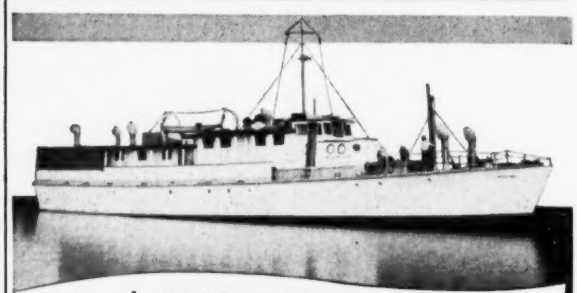
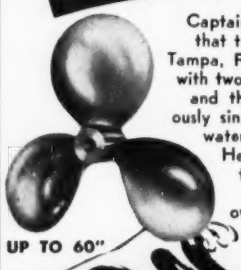
52 FRIENDLY BANKING OFFICES IN WASHINGTON



Used MICHIGAN WHEELS OVER 2 YEARS IN HIGH SALT DENSITY AREA WITH *LITTLE* OR NO GALVANIC EFFECT —



Captain R. J. Fearon of the Delfa Lines reports that the above 150-ton vessel, plying between Tampa, Florida and Mariel, Cuba was equipped with two 44 x 40 Michigan wheels in April, 1950; and though they have been running continuously since then, the high salt density of these waters has caused little or no galvanic effect. He also notes that other vessels have had to change propellers at least every 12 months. For economy's sake alone, you owe it to yourself to equip with Michigan propellers with the famous "K" factor that makes them last as much as three times as long as those of ordinary manganese bronze.

MICHIGAN WHEEL COMPANY GRAND RAPIDS 3, MICHIGAN

a superior quality— SALMON

from the **ICY WATERS OF ALASKA**

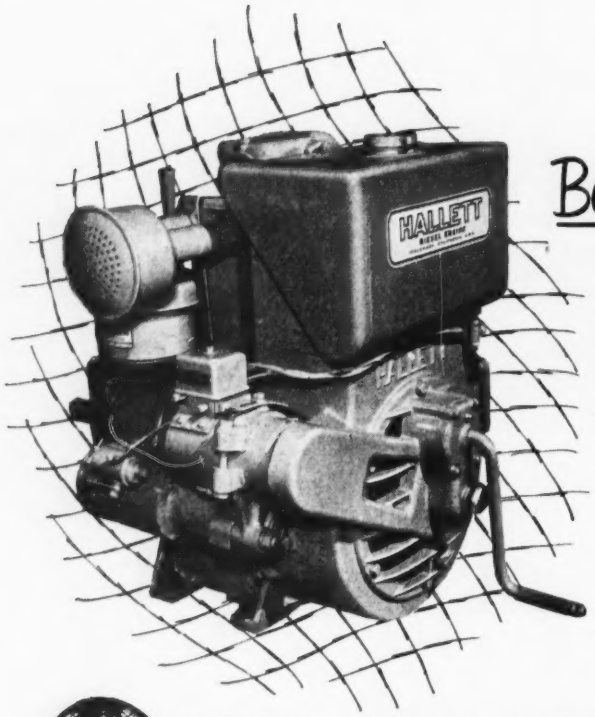
that has Created

an accepted consumer demand
based on its consistent high quality

backed by many Years OF INTENSIVE ADVERTISING

Skinner & Eddy Corporation, Inc.

SKINNER BUILDING, SEATTLE 1, WASHINGTON



Best Catch of all Seasons

HALLETT

Marine Diesels

Rugged, heavy duty, lightweight, 4-cycle Hallett Diesels are preferred by fishermen everywhere. Sales and service conveniently located throughout the world.

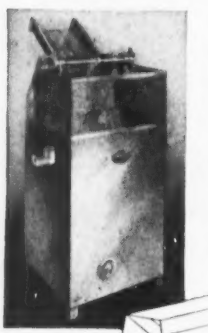
Other Hallett Diesels to 18 HP. Write today to know more about your best catch for all seasons.

HALLETT MANUFACTURING COMPANY
World's Finest Low Horsepower Diesel Engines
1601 WEST FLORENCE AVENUE • INGLEWOOD, CALIFORNIA

PACKAGE FOR LESS...

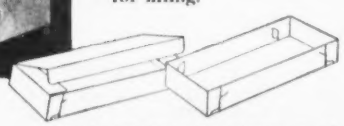
MAJOR SAVINGS in time, labor and materials are yours when you make your *own* cartons and machine-wrap your packages at high speeds . . . Our Tray-Lock Carton Former and Model FF Frozen Food Wrapping Machine provide a combination that's *outstanding for efficiency and economy.*

Model FF in plant of A. Paladini, Inc.



Fast, Automatic Carton Former

Up to 90 uniformly neat trays can be formed per minute with our Tray-Lock machine. Cartons are made from thrifty die-cut blanks—cost far less than factory processed or hand set-up cartons. Except for feeding of blanks, no operator is needed! No scoring is used on sides of cartons. Locks are firm and corners perfectly squared. Cartons keep their shape—won't jam in the wrapping machine. Leaving the Tray-Lock right-side-up, cartons are ready for filling.



Leading Frozen Food Wrapper

The Model FF wraps over 100 packages a minute. Uses any material suitable for wrapping frozen foods. Improved in-feed prevents spilled matter entering the machine. Special spring-mounted elevator well *automatically* adjusts for slight differences in package size. An electric eye accurately locates the wrapper on the carton. Two simple hand-wheel adjustments provide complete change-over for a different size package. Superior oiling system assures easier lubrication and cleaning.

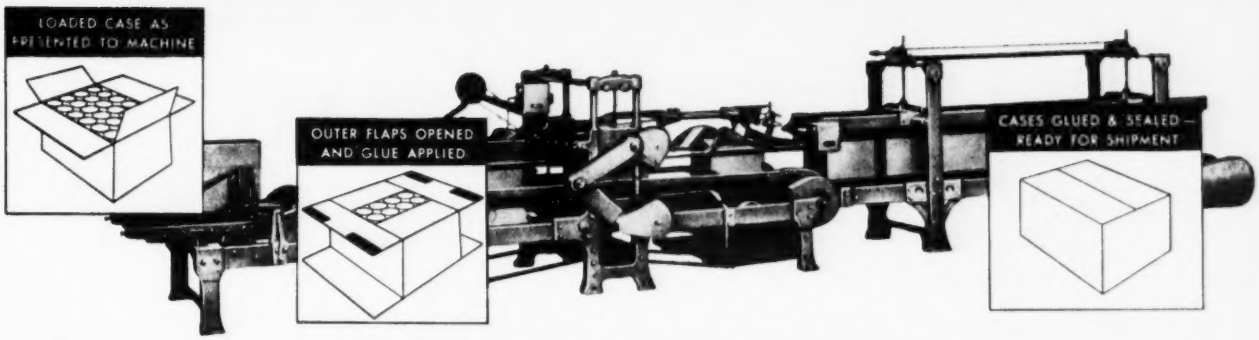
Write or phone our nearest office

FRED TODT COMPANY, Pacific Coast Representative
2021 So. Hill St., Los Angeles 7 — 420 Market St., San Francisco 11
105 Orcas St., Seattle 8 — 205 East 12th St., Vancouver, Wash.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS

STANDARD-KNAPP

GLUERS and SEALERS FOR SHIPPING CASES



For Engineering, Sales and Service Information, Consult Our Nearest Field Office

MAILLER SEARLES, INC.

Main Office: 300 Seventh Street, San Francisco 3, California

322 WESTERN AVENUE
SEATTLE, WASHINGTON

4501 SO. SANTA FE AVENUE
LOS ANGELES 58, CALIF.

CASE — UNLOADERS, OPENERS, PACKERS, GLUERS AND SEALERS, PRINTERS

CAN — UNLOADERS, CONVERGERS, UNSCRAMBLERS, LABELERS, BOOSTERS, PACKERS

BOTTLE and JAR — UNLOADERS, CONVERGERS, UNSCRAMBLERS, RINSERS, DRIERS, LABELERS, PACKERS

CARTON and BAG — COLLECTORS, BALANCED LINE DIVIDERS, PACKERS

From one "old-timer" to another . . .

CONGRATULATIONS TO THE PACIFIC FISHERMAN ON ITS 50th ANNIVERSARY

The business of producing, distributing and selling foods has undergone many changes since the first issue of the Pacific Fisherman YEARBOOK in 1903.

But the key to success has remained the same . . . QUALITY!

LIBBY'S SALMON — All Species

Caught and packed fresh from their native waters, assuring—Firm Texture, Bright Appearance, Clear Color, Natural Flavor.

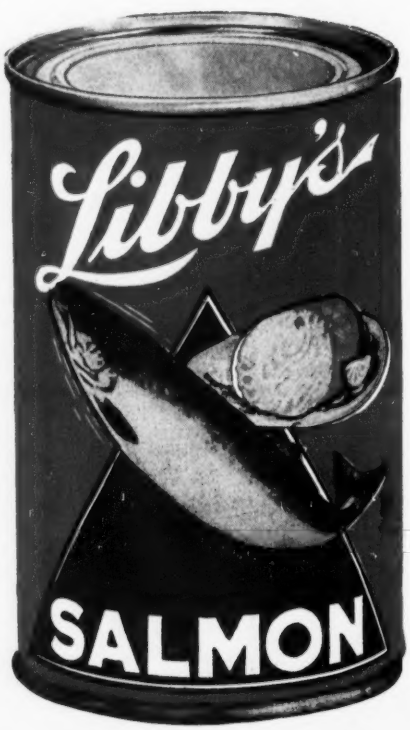
LIBBY, McNEILL & LIBBY

IN SALMON, TOO . . .

LOOK TO

Libby's

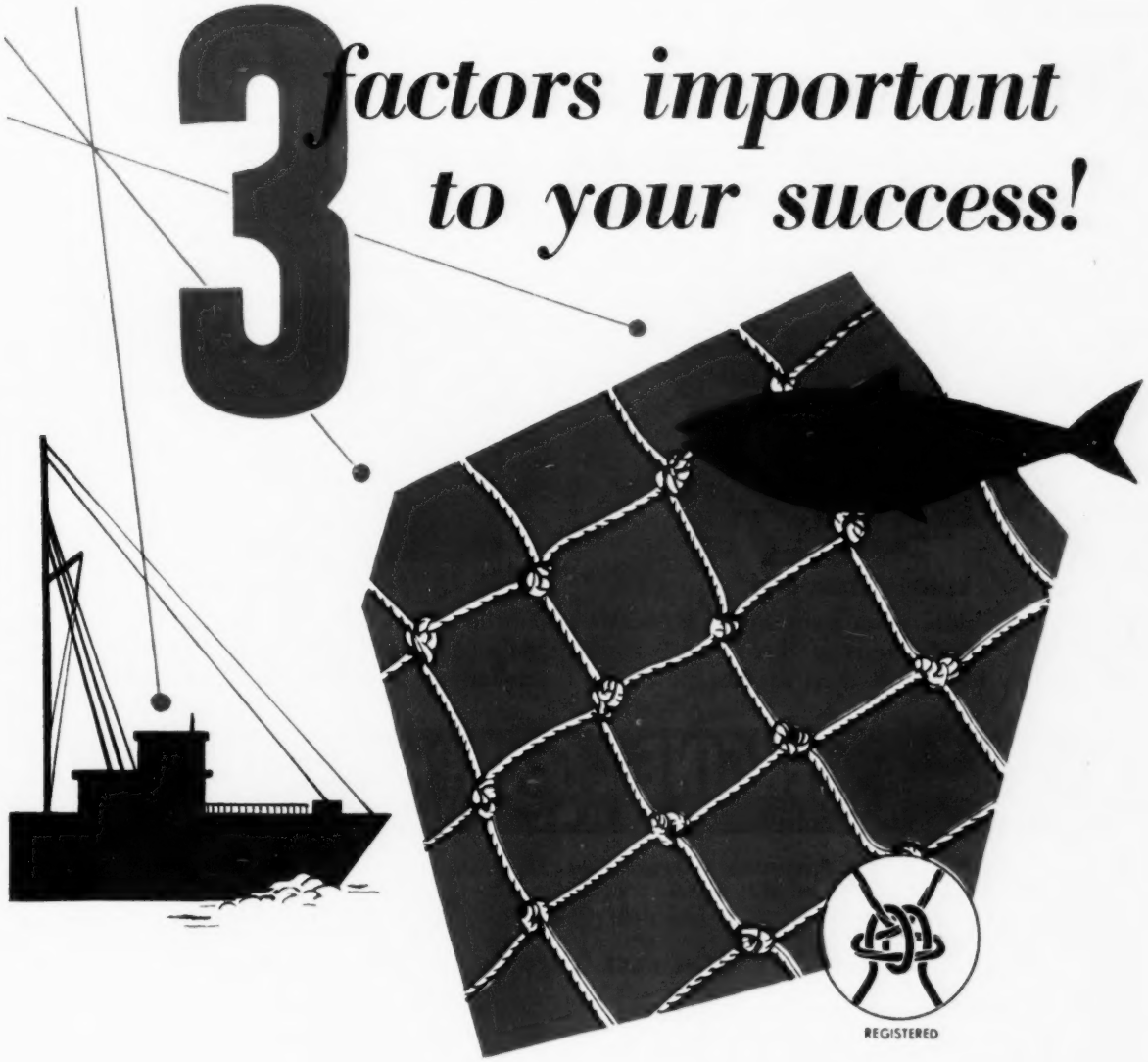
FOR PERFECTION



OTHER LIBBY PRODUCTS

FRUITS
CANNED MEATS
VEGETABLES
JUICES
BABY FOODS
PINEAPPLE
FROZEN FOODS
NECTARS
PICKLES
OLIVES
CONDIMENTS

3 factors important to your success!



A good boat, equipped with an ample supply of Pauls Locknot Netting that will land all the fish caught in your gill nets are the important factors for your success.

Pauls Locknot has been acclaimed the outstanding salmon netting for years past . . . This past proven quality is now being reproduced in the bonded Nylon which has become the leading quality in this sensational product for Salmon, Shad and Sea Bass.

PAULS *Netting*

PAULS FISH NET COMPANY

***Main Office:* 357 W. OHIO ST., CHICAGO, ILL.**

PACIFIC COAST DISTRIBUTORS

F. J. Cardinalli,
Pittsburgh, Calif.

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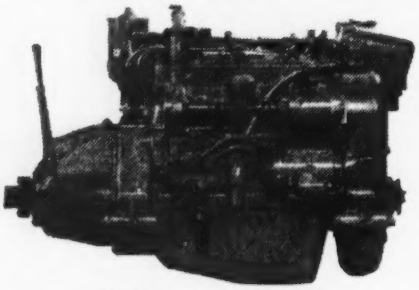
Alfred Puusti & Co.,
212 Taylor Ave.,
Astoria, Oregon

Nordby Supply Co.,
1300 Western Ave.,
Seattle, Washington

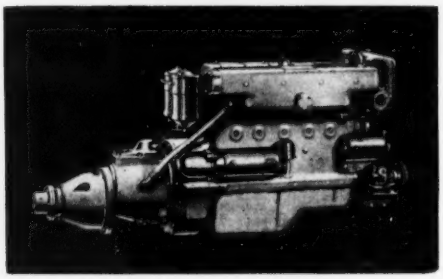
NEW for 1953!
GRAYMARINE

"ALASKA LUGGER SIX"



83-HP at 2400 RPM

"D SIX-427 DIESEL"



100-HP at 2200 RPM

Both are new additions to a distinguished marine engine line. Engineered for specific jobs, they are backed up by over 40 years of "know-how." Through the years dependable, trouble-free operation and fuel economy have made these engines the choice of "dollar-wise" fishermen and fleet operators.

ENGINE & EQUIPMENT CO.
SVERRE O. JULES

GRAY MARINE MOTORS CADILLAC DIESEL

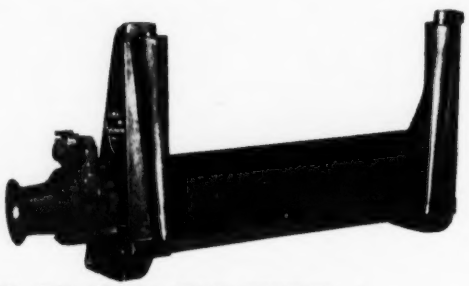
Pacific Northwest and Alaska Distributors

2720 WESTLAKE AVE. N. GArfield 4110 SEATTLE 9, WASH.

THE *"Gillnetter"*—THE LAST WORD IN HYDRAULIC NET ROLLERS

WITH THESE OUTSTANDING FEATURES . . .

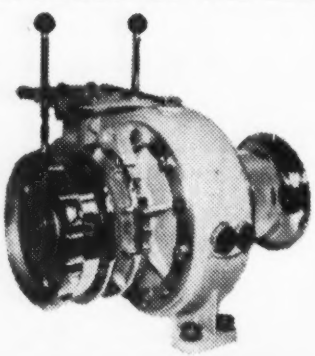
- POSITIVE FREE WHEELING
- VARIABLE SPEEDS 1 TO 60 RPM
- DIRECT DRIVE—NO GEARS
- POWER BOTH ROTATIONS
- HIGH OUTPUT — LOW LINE PRESSURE
- AVAILABLE WITH OR WITHOUT NIGGERHEAD
- NIGGERHEAD MAY BE USED INDEPENDENTLY FROM ROLLER



A TOUCH OF THE LEVER AND THE OIL DOES THE WORK

Hydra-Hoist

Hydraulic takeoff drives for gillnet rollers, anchor winches, trolling and halibut gurdies, crab hoists, and other applications.

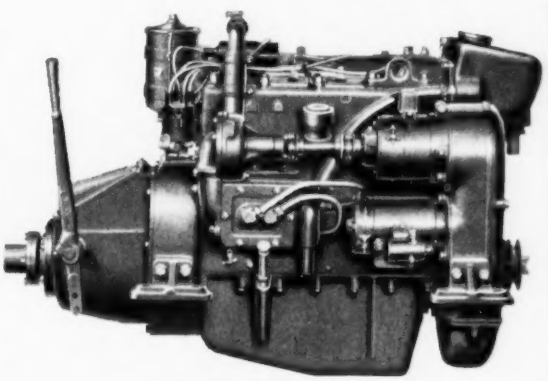


SVERRE O. JULES

HYDRA-SALES, INC.

2720 WESTLAKE AVE. N.
GA. 4110
SEATTLE 9, WASHINGTON

GRAY SUPPLIES 500 NEW ENGINES FOR ALASKA FLEETS



THE "ALASKA LUGGER"

42 h.p. at 1800 r.p.m. fresh water cooled

This powerful small engine is shown equipped with self-lubricating centrifugal pump and closed system cooling with automatic temperature control, as specified by the owners of the salmon fleets operating in Bristol Bay. Reliability under heavy-duty conditions was the deciding factor.

A predecessor of this engine was used in the U. S. Army workboats in World War II, and a larger Graymarine engine with fresh water cooling system is being built in quantity today, under contracts for the Corps of Engineers.

Under the highly successful system developed by Gray, the engine is brought quickly up to full heat, then held within ideal temperature limits by a thermostat valve on a simple by-pass circuit.

From the cold waters of Bristol Bay, up near the Arctic Circle, come the prime Chinook salmon for your table, canned immediately after these prized fish are seined from the sea.

Last year the decision was made to convert the fishing fleets from sail to power. Many makes of engines were tested in small quantities. Leading operators standardized upon the stout Graymarine engine illustrated here, and a total of 500 was supplied by Jules Engine & Equipment Company, Gray distributor at Seattle.

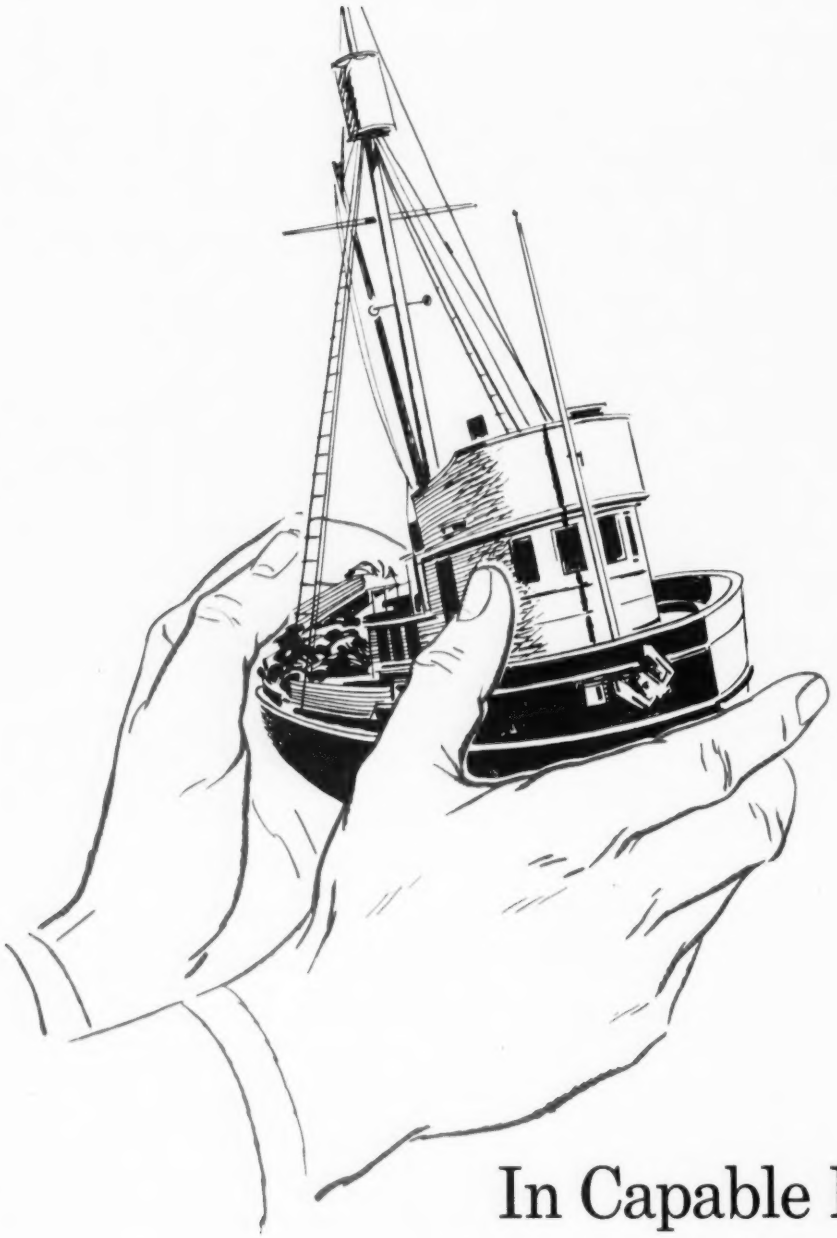
A special operation like this highlights the value of Gray's insistence upon building slower speed engines for heavy boats, an engineering principle pioneered by Gray and now widely accepted. In the higher speed ranges, Graymarine engines are equally outstanding, Express Series for fast cruisers, and Phantom models or Fireball models for runabouts.

Gray's free catalog contains full specifications and installation drawings for all models, gasoline and Diesel.

GRAY

GRAY MARINE MOTOR COMPANY

Detroit 7, Michigan



In Capable Hands...

Like hundreds of other Pacific Coast fishing boat operators, you'll find your equipment is in capable hands when you entrust it to the friendly General Petroleum Marine Distributor in your home port.

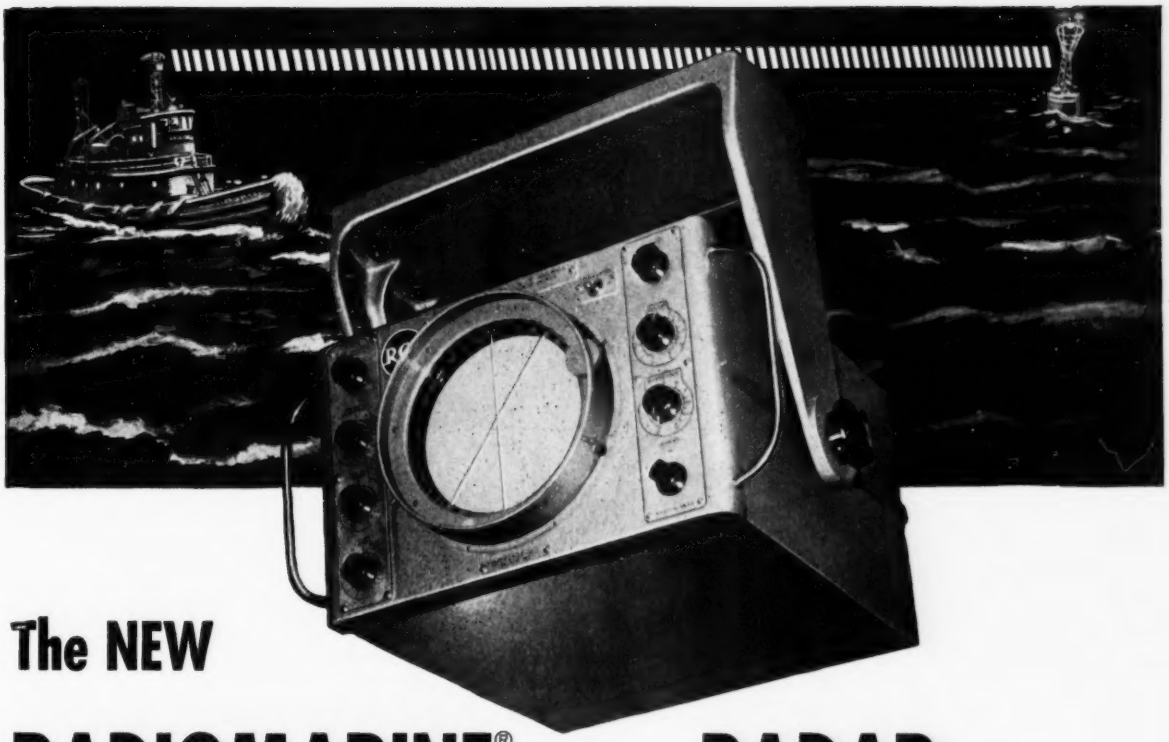
His thoroughly dependable service and complete line of world-famous Gargoyle lubricants are your best assurance of longer, trouble-free engine life.

Visit the G. P. Marine Distributor at the sign of the Flying Red Horse the next time you're in port.

SOCONY-VACUUM

GENERAL PETROLEUM CORPORATION

. . . converting nature's gift for better living



The NEW

RADIOMARINE® 3.2 cm RADAR . . .

for work boats, fishing craft and small vessels

Now, mariners aboard small craft also can enjoy the advantages of radar. This new, low-cost Radiomarine Model CR-103 offers all the advantages of modern radar. Use it for pilotage . . . for position finding . . . as an anti-collision aid . . . for detecting storms.

Despite its small size, it has a 30-kilowatt transmitter. Operating on a wave length of 3.2-centimeters, it provides dependable and superior service.

Engineered and constructed to fit the small space limitations of tugs, harbor craft, trawlers, fishing craft, ferries and yachts, the CR-103 has these outstanding features:

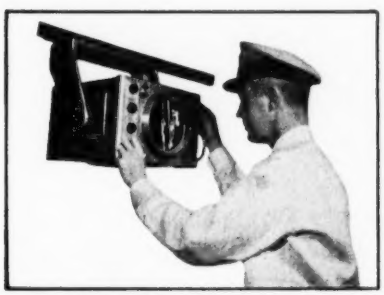
Clear images on a 7-inch scope. Operating ranges of 1, 3, 8 and 20 miles, with a close-in range of 75 yards from the antenna.

50-inch diameter low wind resistance antenna, weighs only 150 lbs.

Operates from 24, 32, 115, 230 volts D. C. or 115/230 volts, 60 cycles.

Backed by Radiomarine's world-wide Service.

Radiomarine CR-103 Radar will enable small vessels to operate on schedule, regardless of weather, in harbor, at sea or inland waters. Investigate its possibilities for safety and economy for your craft. Write for complete information.

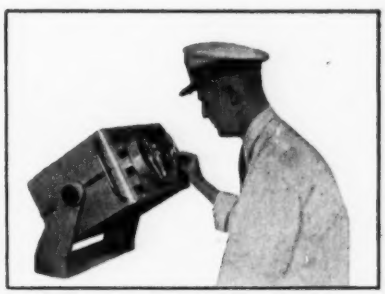


Mounted from the overhead

Radiomarine Corporation of America
1008 Western Avenue
Seattle 4, Wash.
Tel: Seneca 8178

Mounted on Transmitter/Receiver Cabinet

Radiomarine Corporation of America
16 First Street
San Francisco 5, Calif.
Tel: Garfield 1-0673



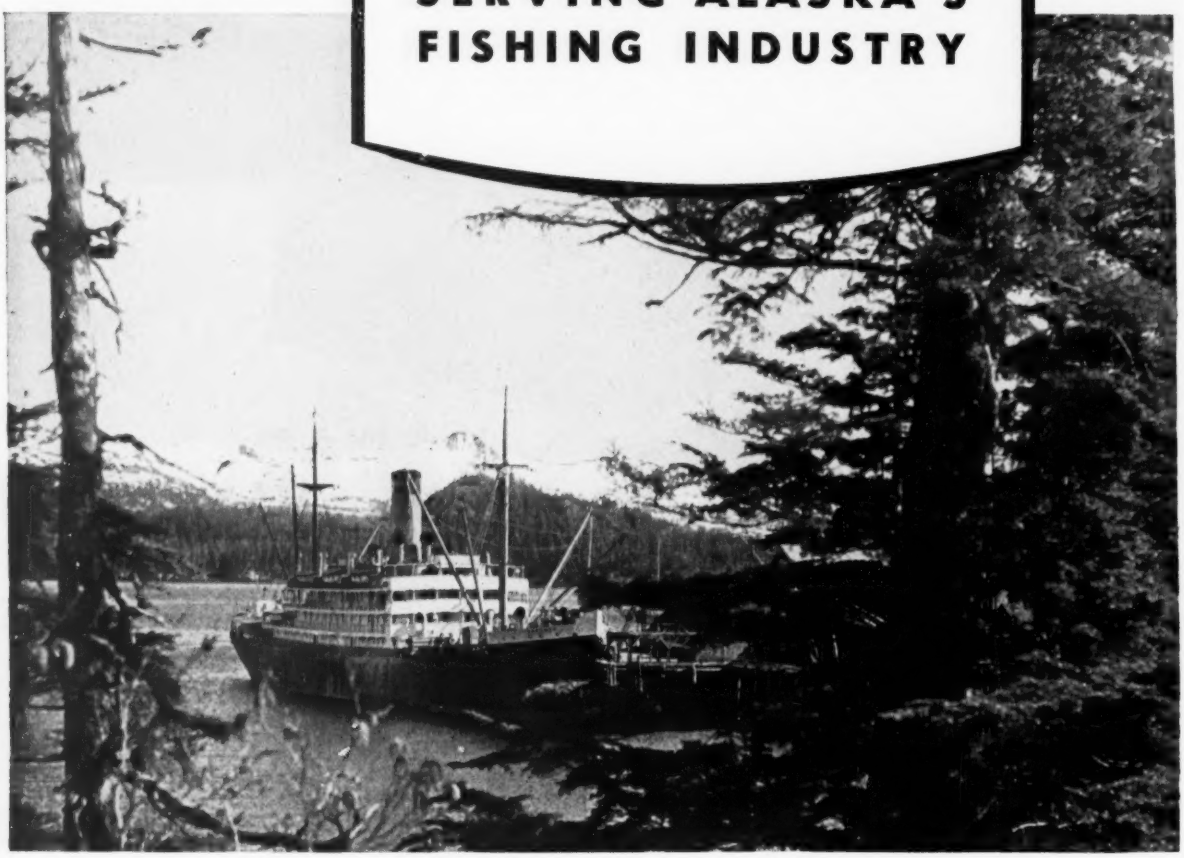
Mounted on a table or shelf

Radiomarine Corporation of America
437 North Avalon Blvd.
Wilmington, Calif.
Tel: Terminal 4-3469

RCA ***RADIOMARINE CORPORATION of AMERICA***

A SERVICE OF RADIO CORPORATION OF AMERICA

ON THE JOB...
SERVING ALASKA'S FISHING INDUSTRY



WE salute Alaska's great fishing industry. The Alaska Line is proud of its vital part on the team — with the industry — providing the world with Alaska salmon and other famous fish products.

For more than fifty years the vessels of the Alaska Steamship Company have been a symbol of progress and development in every port in Alaska.

ALASKA STEAMSHIP COMPANY

"SERVING ALL ALASKA"

PRODUCERS and DISTRIBUTORS OF

Quality PACIFIC COAST FISH PRODUCTS

FRESH • FROZEN
SALTED • SMOKED
SHELL • CANNED

WASHINGTON FISH and OYSTER CO., INC.
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PORTLAND FISH COMPANY
301 N. W. Third Avenue
Portland, Oregon

MEREDITH FISH COMPANY
2640 Fifth Street
Sacramento, California

WASHINGTON FISH and OYSTER CO. OF CALIF.
544 Sansome St.
San Francisco, California

A Dependable and Diversified Supply of High Quality Pacific Seafoods

OWNERS and OPERATORS of
CANNERIES, COLD STORAGES and DISTRIBUTING PLANTS

MEMBER NATIONAL FISHERIES INSTITUTE, INC.

Developed by Research

UNITED STATES PATENT NO. 2590586

Protected by Patent

To give you a really superior net made of

BONDED NYLOCK® NYLON

What is BONDED Nylon? BONDED Nylon is Nylon Twine that has been coated with a special synthetic resin by an *exclusive patented process* (U. S. Patent #2590586) granted to The Heminway & Bartlett Mfg. Co. for the manufacture of their NYLOCK Nylon Twine.

Why does BONDED NYLOCK Nylon make a better net? NYLOCK Nylon Twine makes a better net because its special patented BONDED process . . .

- prevents knot slippage . . . gives the net less stretch
- strengthens the net and lengthens its life
- prevents fraying and discoloring
- makes the nets much easier to handle
- keeps dirt and marine matter from clinging to the net
- maintains just the proper amount of elasticity so that fish can not wiggle free
- makes mending much easier for BONDED twine enables the fisherman to tie knots that remain *really tight*

For further information, get in touch with one of the following manufacturers who make nets of BONDED NYLOCK NYLON *Twine:*

R. J. EDERER, 540 Orleans St., Chicago, Ill.; Unity and Elizabeth Sts., Philadelphia, Pa.
PAULS FISH NET CO., 357 W. Ohio St., Chicago, Ill.
ADAMS NET & TWINE CO., 701 N. 2nd St., St. Louis, Mo.
THE FISH NET & TWINE CO., 310 Bergen Ave., Jersey City, N. J.
A. M. STARR NET CO., East Hampton, Connecticut

Look for this tag on your netting. It identifies the genuine **BONDED** NYLOCK NYLON

BONDED NYLOCK NYLON TWINE PRODUCED BY:

The **HEMINWAY & BARTLETT** *Mfg. Co.*

500 Fifth Avenue, New York 36, N. Y.

Pacific Coast Representative: **J. W. ASHLEY,**
1940 26 Avenue North, Seattle 2, Washington

Always

the same world-famous quality year in—year out!

DEL MONTE Salmon is packed with careful control, the same rigid requirements that distinguish all DEL MONTE Brand Products. You can be sure your customers will give it first preference.

Years of effective advertising have indelibly stamped the familiar DEL MONTE Shield in the minds of millions of consumers. It's the label they remember...and instantly recognize as the brand that puts *flavor first*...ALWAYS!

DEPEND ON DEL MONTE—
YOUR CUSTOMERS DO!

CALIFORNIA PACKING CORPORATION
San Francisco, California

COAST FISHERIES

DIVISION OF

The Quaker Oats Company

—Packers of—

California Sea Foods

•

SARDINES
TUNA • MACKEREL

Fish Meal and Oil

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—BRANDS—

BILTMORE
FLAKIES
MERMAID SUPREME
SATISFACTION
WAVE KIST
TREASURE
KING SOLOMON

•

WILMINGTON, CALIFORNIA

Cable Address—Cofisco Codes—Bentley Calpac, A.B.C. (5th Edition)

GIUSEPPINA (San Diego) – A Caterpillar D8800 Marine Engine powers this 45½' x 15' fishing boat, driving a 34"x44" wheel through 3:1 reduction gear at 8½ knots. Co-owner Sam Bompenseiro says: "For the past four years this engine has operated at full throttle. We never slow it down and it has given us no trouble whatsoever."

"Fishing" Engines

THE RIGHT POWER AND SIZE FOR YOUR BOAT!

WHY are Caterpillar Diesel Marine Engines often referred to as "fishing" engines? Here are some mighty good reasons. They're always ready to go. When you're out there, they leave you free to concentrate on fishing, not fixing. They're practically foolproof—even a green hand can run one. They're economical, burning low-grade, low-cost fuel without fouling, even when idling. And they don't require pampering – normal maintenance keeps them going steadily and adds extra years to their long life span.

All that, plus dockside service from your Caterpillar Dealer when needed, makes a Cat the best buy for anyone earning his living fishing. There's one *exactly* fitted to your requirements in the complete line of propulsion engines, marine electric sets and marine power units. And remember this: you don't have to worry about the power being "all there." The horsepower and kilowatt outputs are *honestly* rated. For full information, see your nearby Caterpillar Dealer.

MODEL	PROPULSION ENGINES		ELECTRIC SETS	
	HP*	HP***	KW**	KW***
D397	500	400	315	280
D386	400	320	250	225
D375	335	270	210	185
D364	265	215	165	145
D337	250	170	(Available soon)	
D326	170	118	(Available soon)	
D17000	200	150	100	100
D13000	150	120	83	75
D8800	102	82	55	50
D318	103	80	60	58
D315	70	53	40	39
D311	52	38	30	27

* Intermittent output (1 hour) at maximum speed and with full equipment.
** Rated output (12 hours) with full equipment.
*** Continuous output with full equipment. For non-stop runs, 24 hours per day, every day.

CATERPILLAR, SAN LEANDRO, CALIF.; PEORIA, ILL.

CATERPILLAR
REG. U. S. PAT. OFF.

DIESEL MARINE
PROPULSION ENGINES
ELECTRIC SETS
POWER UNITS

KADIAK
FISHERIES COMPANY

1826 EXCHANGE BLDG.

SEATTLE 4 WASHINGTON

ALASKA
CANNED SALMON

ALASKA CANNERIES

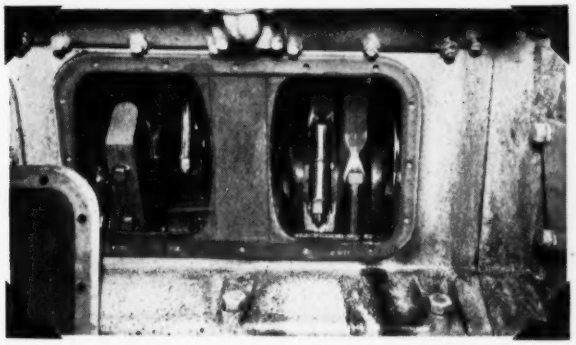
SHEARWATER and PORT BAILEY

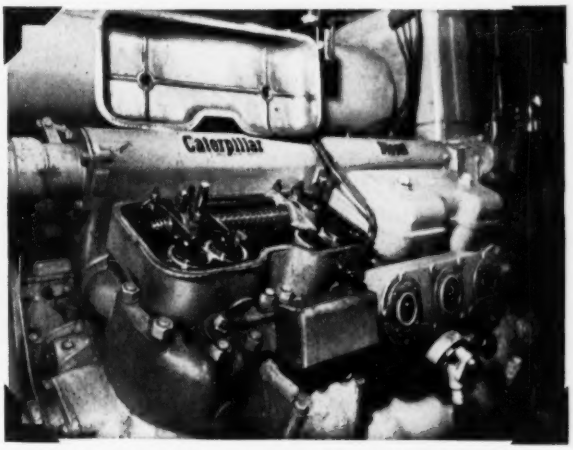
STANDARD ENGINEER'S REPORT

DATA

LUBRICANT	RPM Delo Oils
UNIT	Caterpillar D-375 diesel
SERVICE	Coastal fishing — bottom fish
CONDITIONS	Constant load
FIRM	A. Paladini, Inc. Fields Landing, Calif.

Heavy-duty engine clean after 4146 hours' work!

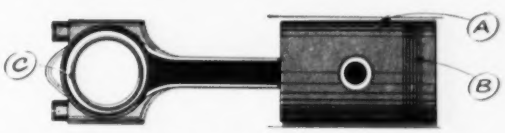




AFTER 4146 HOURS of steady work in the 270 H.P. supercharged diesel propulsion engine of the Catherine Paladini below, note how clean and free from deposits RPM DELO Supercharged—2 Lubricating Oil has kept parts. Crankcase drains and filter changes at 1500-hour intervals have shown no sludge, according to Axel Bjork, Skipper. He says, "The engine ran perfectly during the more than 4000 hours of tough work—if anything, it runs better now than at first."

THE 73-FOOT-LONG CATHERINE PALADINI has a 19.6 beam. She fishes from Oregon to San Francisco, bucks heavy seas and tides on trips that last from three days to over a week. Seas were exceptionally heavy during the past winter, giving her new engine an extra tough workout.

How RPM DELO Oils keep engines clean and prevent wear



A. Contain special additives that provide metal-adhesion qualities...keep oil on parts whether they are hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean, helps prevent scuffing.

C. Special compounds stop corrosion of any bearing metal, and oil foaming in both wet and dry sump engines.

There is an RPM DELO Oil to meet every heavy-duty engine operation condition.

FREE BOOKLET on the RPM DELO Oils gives you complete information. Write or ask for it today.

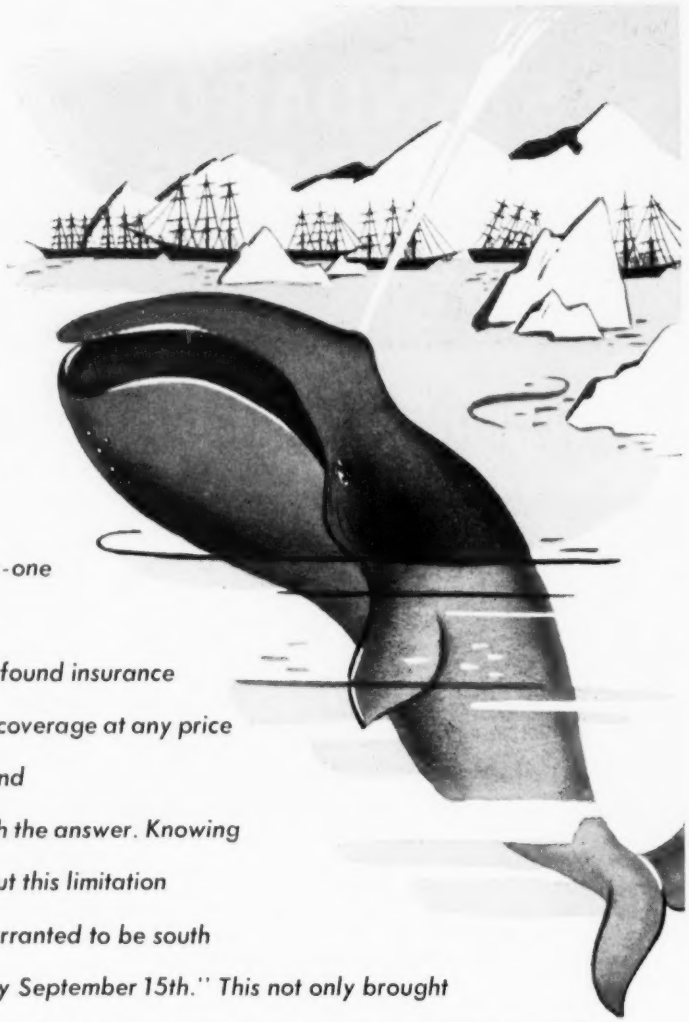
RPM DELO LUBRICATING OILS

STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA

A Whale of a Story!



'Twas in September of '71. The whaling fleet was north of Bering Strait, well into the Arctic Ocean. In their eagerness to follow the whales, they stayed too late. The new ice moved in and thirty-one ships were abandoned and destroyed.

After this stunning disaster, whalemen found insurance almost unobtainable and were begging for coverage at any price It was Captain Willisstun of Fireman's Fund Insurance Company who came up with the answer. Knowing whaling and also the Arctic, he put this limitation in all whale ship policies: "Warranted to be south of the latitude of St. Paul's Island by September 15th." This not only brought Fireman's Fund most of the whaling insurance, but the respect and gratitude of whalemen everywhere.

Although its operations are world-wide, Fireman's Fund has always remained a home company to the Pacific Coast, with its underwriting services, hull, cargo and P. & I., and its claim-settling facilities unexcelled.

Whether they sail purse seiners, tuna clippers, cargo carriers, or passenger ships, men of the sea like to do business with men who know and understand the perils of the sea—they like to do business with Fireman's Fund. There is an independent agent or broker in your community representing Fireman's Fund.

MARINE DEPARTMENT

Fireman's Fund Group

FIREMAN'S FUND INSURANCE COMPANY • FOUNDED 1863 •

Head Office: 401 California Street, San Francisco 20, California
Departmental Offices: New York • Chicago • Boston • Atlanta • Los Angeles • Seattle
PACIFIC COAST OFFICES: SEATTLE, SPOKANE, PORTLAND, SACRAMENTO, OAKLAND, LOS ANGELES, SAN DIEGO, VANCOUVER, B.C.

In '53...Compare and See...

why CHRYSLER *is* AMERICA'S *No. 1* MARINE ENGINE

Only Chrysler Engines in their Power Ranges have all these features as STANDARD EQUIPMENT

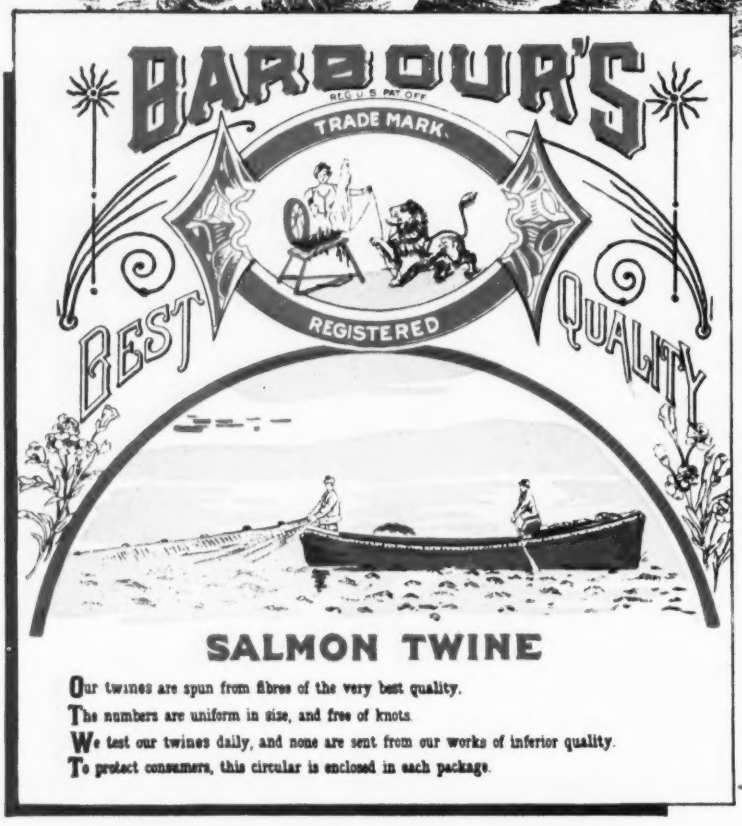
★*Low Cut-in Generator* ★*Water Distributing Tube* ★*Positive-Displacement Water Pump* ★*Splashproof Ignition System* ★*Full-Flow Oil Filter* ★*Readily Accessible Reverse Gear Adjustment* ★*Brass Water Tubing Throughout* ★*By-Pass Thermostat* ★*Choice of Right or Left Rotation Engines* ★*Waterproof Spark Plugs*

SEE FOR YOURSELF . . . compare the 1953 line of Chrysler Marine Engines with each of their competitors. (You'll find that feature for feature you can't beat Chrysler). Then see your Marine Dealer for a Chrysler engine to fit your hull. (You'll be glad you did . . . for a Chrysler engine *in your boat* will give you performance, dependability and economy second to none.)

Visit the Chrysler Exhibit at the National Motor Boat Show, Grand Central Palace, New York, January 9th through 17th.

For complete details on the 1953 Chrysler line, write: Dept. 91, Marine Engine Division, Chrysler Corporation, Trenton, Michigan.

LINEN or NYLON..


BARBOUR'S
REG U.S. PAT OFF
TRADE MARK
REGISTERED
BEST QUALITY
SALMON TWINE
Our twines are spun from fibres of the very best quality.
The numbers are uniform in size, and free of knots.
We test our twines daily, and none are sent from our works of inferior quality.
To protect consumers, this circular is enclosed in each package.

This sheet was enclosed in each package when, before the turn of the century, Barbour's introduced the first American machine-made double-knot linen salmon gill netting.

Ever since, Barbour's Double-Knot Linen Salmon Gill Netting and Twine have been the choice of salmon fishermen for dependable, longer lasting netting and twine, for larger salmon catches.

MAKERS OF FINE NETTING FOR 111 YEARS

BARBOUR'S

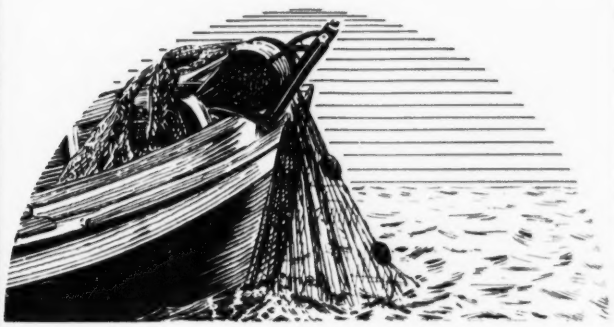
THE LINEN THREAD CO., INC.

DOUBLE-KNOT SALMON GILL NETTING AND TWINE

Pacific Marine Supply Co., Seattle
Tacoma Marine Supply Co., Tacoma
Oregon Marine Supply Co., Portland and Astoria
Pacific Fishing & Trading, Seattle

BARBOUR'S HAS BOTH!

BARBOUR'S NYLON



SALMON NETTING

- Our nets are 100% nylon.
- The twines are uniform in size.
- We test our twines daily.
- To protect customers, this circular is enclosed in each package.

WHETHER you lean toward linen or nylon netting, count on Barbour's to deliver the same reliability . . . the same tried-and-true netting quality that Pacific Coast salmon fishermen have recognized for well over a century. Linen or nylon—each has its own special advantages. Whichever you prefer, make sure you get the netting backed by the Barbour name. It *always* pays in the end.

MAKERS OF FINE NETTING FOR 111 YEARS

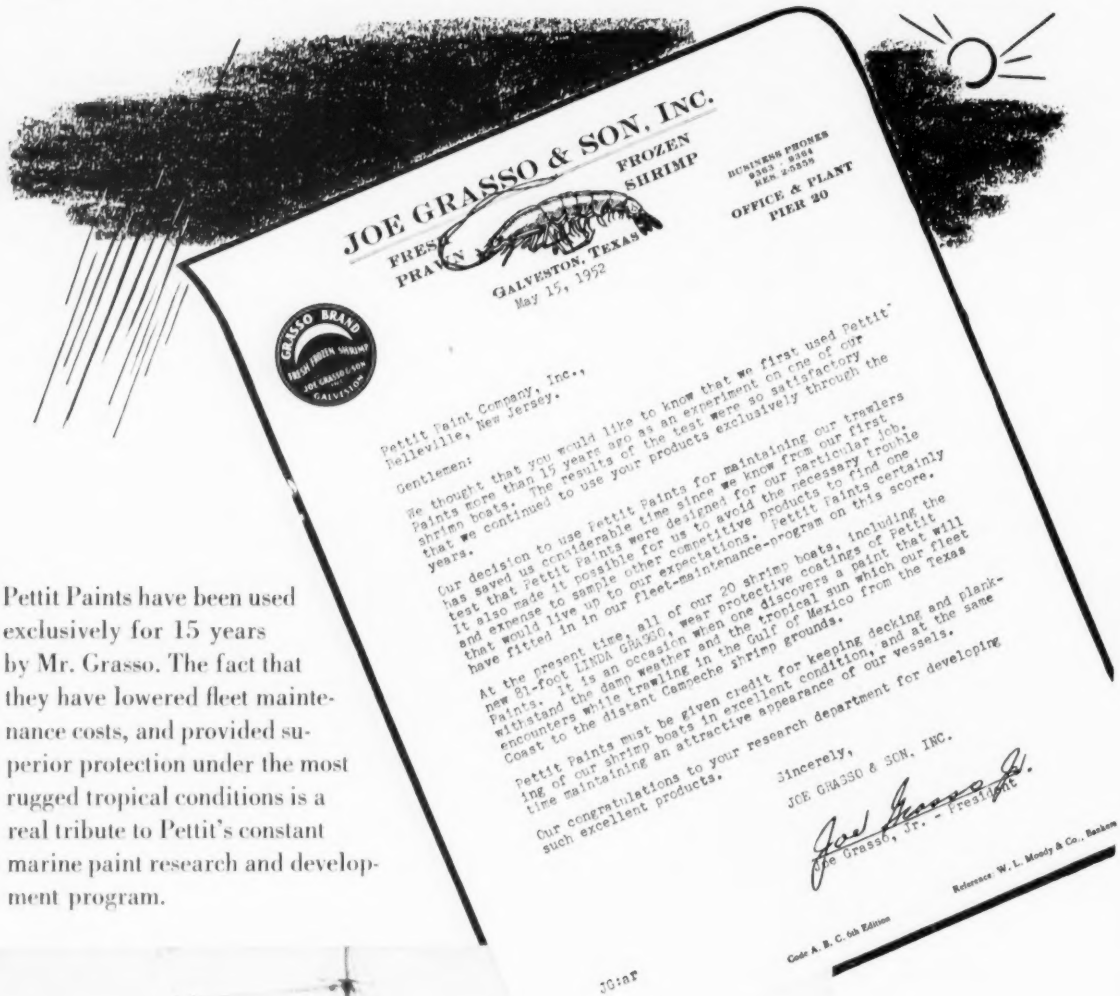
BARBOUR'S

THE LINEN THREAD CO., INC.

DOUBLE-KNOT NYLON SALMON GILL NETTING

Pacific Marine Supply Co., Seattle
Tacoma Marine Supply Co., Tacoma
Oregon Marine Supply Co., Portland and Astoria
Pacific Fishing & Trading, Seattle

Pettit PROTECTS 20 SHRIMP BOATS from damp weather and tropical sun!



JOE GRASSO & SON, INC.
FRESH FROZEN PRAWN SHRIMP
GALVESTON, TEXAS
BUSINESS PHONES 2363 - 2364 RES. 2-2358
OFFICE & PLANT PIER 20

GRASSO BRAND FRESH FROZEN SHRIMP JOE GRASSO & SON GALVESTON

May 15, 1952

Pettit Paint Company, Inc.,
Belleville, New Jersey.

Gentlemen:

We thought that you would like to know that we first used Pettit Paints more than 15 years ago as an experiment on one of our shrimp boats. The results of the test were so satisfactory that we continued to use your products exclusively through the years.

Our decision to use Pettit Paints for maintaining our trawlers has saved us considerable time since we know from our first test that Pettit Paints were designed for our particular job. It also made it possible for us to avoid the necessary trouble and expense to sample other competitive products to find one that would live up to our expectations. Pettit Paints certainly have fitted in in our fleet-maintenance-program on this score.

At the present time all of our 20 shrimp boats, including the new 81-foot LINDA GRASSO, wear protective coatings of Pettit Paints. It is an occasion when one discovers a paint that will withstand the damp weather and the tropical sun which our fleet encounters while trawling in the Gulf of Mexico from the Texas Coast to the distant Campeche shrimp grounds.

Pettit Paints must be given credit for keeping decking and planking of our shrimp boats in excellent condition, and at the same time maintaining an attractive appearance of our vessels.

Our congratulations to your research department for developing such excellent products.

Sincerely,
JOE GRASSO & SON, INC.
Joe Grasso, Jr. - President

Reference: W. L. Moody & Co., Bankers

Code A. B. C. 6th Edition

JG:ar

Cable Address GRASSO

Pettit Paints have been used exclusively for 15 years by Mr. Grasso. The fact that they have lowered fleet maintenance costs, and provided superior protection under the most rugged tropical conditions is a real tribute to Pettit's constant marine paint research and development program.

New 81-foot LINDA GRASSO, newest addition to shrimp fleet owned by Joe Grasso & Son, Galveston, Texas.

PETTIT PAINT CO., Inc., BELLEVILLE, NEW JERSEY

SINCE 1861

PACIFIC COAST DISTRIBUTORS: Nordby Supply Co., Seattle, Wash., and Ketchikan, Alaska; Adanac Marine Supply Co., Ltd., Vancouver, B. C.; The Beebe Co., Portland and Astoria, Oregon; Carstens Marine Supplies, Spokane, Wash.; Gray's Motor Service, Inc., Salt Lake City, Utah; B. H. Hebgen Co., Ltd., San Francisco and Los Angeles, Calif.; Nuttall Styris Co., San Diego, Calif.; Outdoor Equipment Corp., Las Vegas, Nevada; Jack Bolton Marine, Denver, Colo.

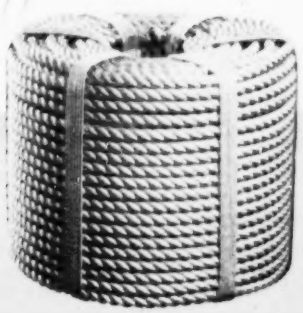
SOME ROPES CATCH
MORE FISH

TUBBS
EXTRA SUPERIOR MANILA
CORDAGE COMPANY

Minutes and seconds count when the fish are running, so the fisherman whose boat, nets, and rope are reliable is surest to bring back a catch. (Many a haul has been lost by the delay of an ill-timed breakdown.)

Because you want dependability in the rope you buy, ask for Tubbs Extra Superior Manila. Among fishermen it's a name with an honest reputation for good service.

Tubbs Extra Superior Manila is supplied in all sizes, lays, and treatments required for commercial fishing.



TUBBS
CORDAGE COMPANY
SAN FRANCISCO
SEATTLE

The Best Marine Paints for Every Specific Use

TOPSIDES

INTERNATIONAL MARINE FINISHES are "almost indestructible." They are smooth flowing, easily applied and excellent in coverage.

DECK PAINTS

INTERNATIONAL Deck Paints and Enamels for wood, canvas and metal. NO-SKID DECK PAINT prevents slipping.

BOTTOM PAINTS

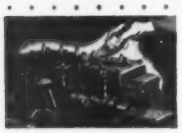
INTERNATIONAL Copper Bronze, G. M., INTER-TROP Copper Paints, SUPERTROP Anti-fouling and famous SINGAPORE are available in a wide range of colors.

WATERLINE STRIPING

INTERLUX comes in a wide variety of bright colors. SINGAPORE (anti-fouling) in red, green, black and blue.

VARNISHES

INTERNATIONAL Varnishes are considered by master painters everywhere to be the finest varnishes obtainable.

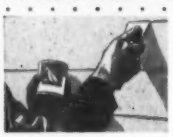


ENGINE ENAMELS

INTERNATIONAL ENGINE ENAMELS are unaffected by oils, gasoline, moisture, fumes and are extremely heat resistant.

INTERIOR COATINGS

INTERNATIONAL CABIN ENAMELS, eggshell finish, require minimum attention to keep clean. Dry dust-free in two hours.



PUTTIES AND COMPOUNDS

International offers a complete line of compounds for use above and below the waterline.

INTERNATIONAL Paints, Varnishes and Specialty Products are known and preferred wherever boats are built, serviced and operated. Send for free color cards and descriptive circulars.

International MARINE PAINTS

International Paint Company, Inc.

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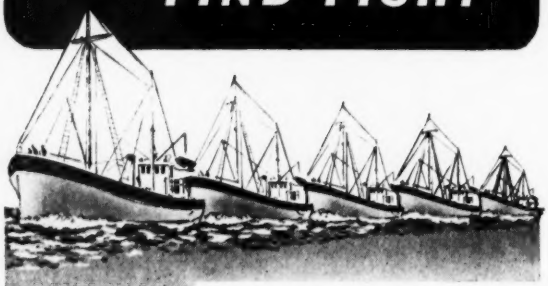
1145 Annunciation St., New Orleans, La. • 6700 Park Ave., Montreal, Quebec
105 West, 2nd Avenue, Vancouver, B. C.

WORLD'S LARGEST MARINE PAINT MAKERS

HERE'S PROOF FATHOMETERS*

(Echo Depth Sounders)

FIND FISH!



CALM WAVE
BONNIE
WINCHESTER
MICHIGAN
WISCONSIN
THOMAS WHALAN
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TRITON
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TEXAS
FLYING CLOUD
PHANTOM
RED JACKET
HILDA GARSTON
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SURGE
ATLANTIC
ESTHER M.
CAMBRIDGE
MAINE

Month after month you'll find these trawlers high on the list of landings at Boston Fish Pier. *Of the 23 leaders in September, every boat is Submarine Signal FATHOMETER equipped.* It's the same in other ports and for every type of fishing operation.

A Submarine Signal FATHOMETER gives you the underwater facts you need for profitable operation . . . spots the fish; shows the length, depth and density of schools; tells where and how deep to set nets or lines. Ask your authorized Raytheon Marine Dealer about the right Submarine Signal FATHOMETER for your needs or write for complete information.

Submarine Signal FATHOMETER* CADET

Indicates depths from 1 foot to 160 feet, gives true definition at 900 soundings per minute. Finds fish, locates shoals, ledges, underwater hazards. Pays for itself in safety, faster trips, bigger hauls. Transducer may be bilge mounted; no dry docking, no holes in hull.

Submarine Signal FATHOMETER* JR.
(Recording Models 1373 and 1373S)

Records contour and type of bottom on moving chart; length, density and depth of fish schools. Model 1373 with dual range 1 to 100 and 100 to 200 fathoms. Model 1373S with dual range in feet for shallow water soundings: 1-200 and 200-400 feet.

Submarine Signal FATHOMETER* JR.
Indicating Model 1080C

A red light indicator that shows water depth beneath keel 240 times per minute; depth range to 600 feet — 100 fathoms; warns of shoals, reefs, hidden hazards; finds fish; facilitates bottom navigation. Simple, compact, easy to install.

*Reg. U. S. Pat. Off.

RAYTHEON

RAYTHEON

MANUFACTURING COMPANY

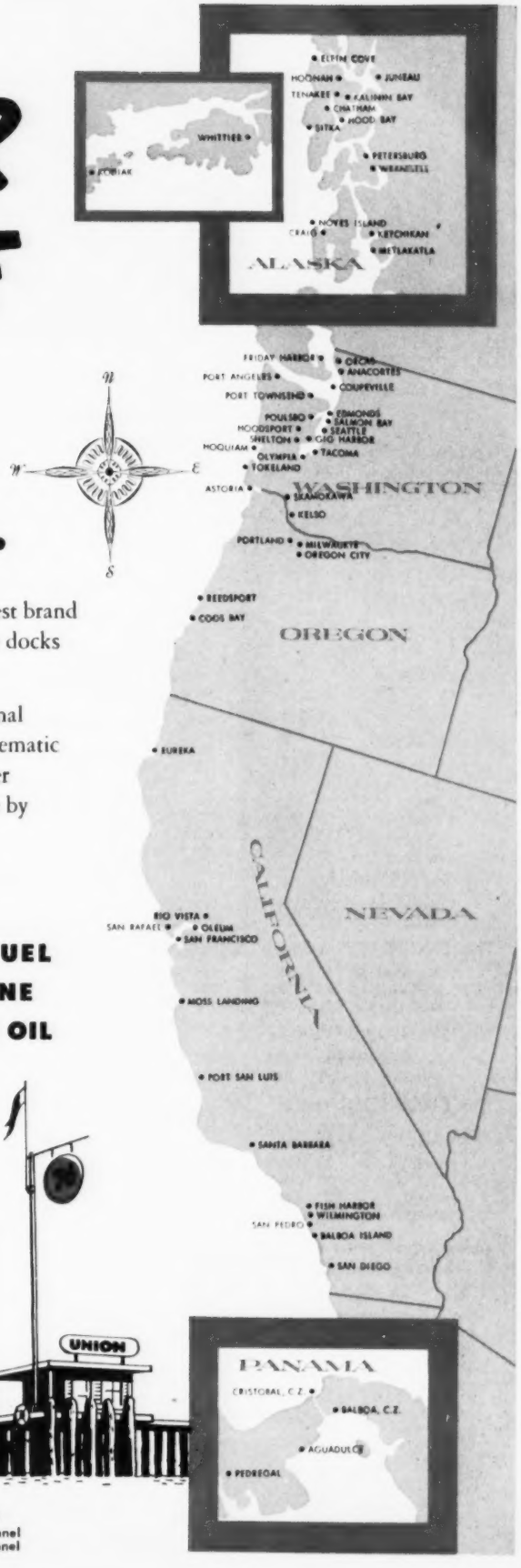
EQUIPMENT SALES DIVISION

DEPT. 6270-PN WALTHAM 54, MASSACHUSETTS

DISTRICT OFFICES: BOSTON, NEW YORK, CLEVELAND, CHICAGO, NEW ORLEANS, LOS ANGELES (WILMINGTON), SAN FRANCISCO, SEATTLE
INTERNATIONAL DIVISION: 19 RECTOR ST., NEW YORK CITY

AT YOUR SERVICE

from Alaska to Panama...



You receive a special brand of service with the finest brand of fuels and lubricants at these Union Oil marine docks located in convenient Pacific harbors.*

Friendly Union Oil dock operators take personal pride in giving your equipment thorough and systematic attention. They will show you how you can lower maintenance costs and boost engine performance by servicing your marine engine *regularly* with the proper fuel and lubricant.

76 WHITE GASOLINE DIESOL FUEL
7600 GRADE 80/87 GASOLINE
T5X MOTOR OIL TRITON MOTOR OIL

UNION OIL COMPANY
OF CALIFORNIA

*Union Oil marine products are also available in Puntarenas, Costa Rica; in most principal west coast ports throughout South America; and in the Far East.

76

SEATTLE
Pier 71
Lake Union

SAN PEDRO
Main Channel
West Channel

Three generations of seafaring men have chosen

Lathrop

ENGINES

individually assembled by true craftsmen
to assure exceptionally fine performance
and long life — yet priced competitively.

Engine Specifications for Pleasure Boats and Work Boats

20 to 200 HP. Gasoline & Diesel

Model	HP.	R.P.M.	Cyl.	Displ.	Wt.
The LH Models					
LH-4	45	2800	4	133	440
LH-Master	70	2500	4	214	795
LH-6	64	2200	6	282	876
LH-Atom	90	3000	6	282	876
LH-Deluxe	120	3000	6	320	916
LH-Super	132	3200	6	339	936
The MYSTIC Models					
Mystic 125	130	1800	6	585	1700
Mystic 175	175	1535	6	1013	2510
The ENGINEERS' Models					
Engineers' 60	60	875	4	665	2100
Engineers' 75	75	915	4	792	2290
Engineers'115	118	1000	6	1188	2950
The STANDARD Models					
Standard 30	30	660	3	463	1450
Standard 40	45	710	4	618	1750
The DIESEL Models					
D-50	50	800	4	665	3000
D-60	60	900	4	665	3000
D-80	80	800	6	998	4200
D-90	90	900	6	998	4200
D-100	100	1000	6	998	4100
DH-200	187	1600	6	935	5100

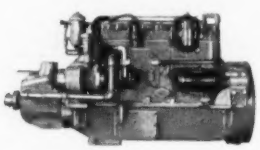
WRITE US ABOUT YOUR BOAT

We'll send you promptly our illustrated catalog and any other information you'd like. Or, call us at the factory — Mystic, Conn. 5-2619

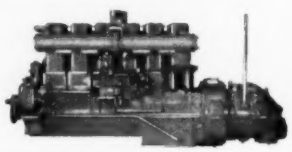
Look for DEPENDABILITY first, when buying your engine.

The individual attention each engine receives during manufacture is the key to the Lathrop reputation for dependability. We have no mass production. The Lathrop engine you buy has been assembled by craftsmen who have been with us for years. The pride they have in their work pays off when you are on the water and your engine is helping to put more dollars in your pocket.

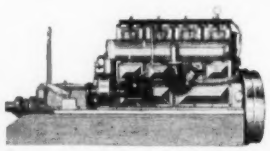
Be sure to look at a Lathrop. You'll be glad you did, just as thousands of skippers have over the past 56 years.



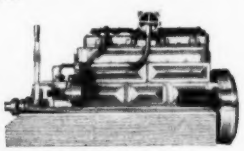
THE LH-SUPER
A light-weight, low-cost, high speed model. Now available with choice of hydraulic or manual control of reverse gears. (As are all 6-cylinder LH-Models.)



THE D-100 DIESEL
An up-to-the-minute design, built to operate very economically day in and day out for years. Delivers 100 HP. at 1000 R.P.M. Many extra features as standard equipment.



The ENGINEERS and STANDARD models
Medium and slow-speed engines for heavy duty. 30 to 118 HP. Built solidly in every part for ruggedness and long life.



THE MYSTIC 125
A medium speed, 6-cylinder engine noted for saving dollars on maintenance, lack of vibration and ability to withstand hard use long after other engines would have worn out.

IN THE PACIFIC...
SOUND INSURANCE PROTECTION!

ALONG the whole sweep of the Pacific Coast, the Marine Office of America is on guard to protect from loss the substantial marine interests of the Salmon Industry and the great West Coast Fisheries.

This protection is *sound,* depression-proof protection, as strong as money can buy—for the Marine Office represents 7 leading Marine and Fire Companies—one of the largest and strongest groups of its kind in the United States.

Furthermore, the *strength* of its protection is matched by the *efficiency* of its service with offices throughout the United States and claim-settling facilities throughout the world.

Sound insurance protection is vital to the successful operations of the fishing industry of the Pacific. *The Marine Office of America provides it!*

See Your Local Agent or Broker!

MARINE OFFICE OF AMERICA

Northwestern Department:
Paul A. Carew, Manager
Colman Building
Seattle 4, Washington

Pacific Department:
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140 Sansome Street
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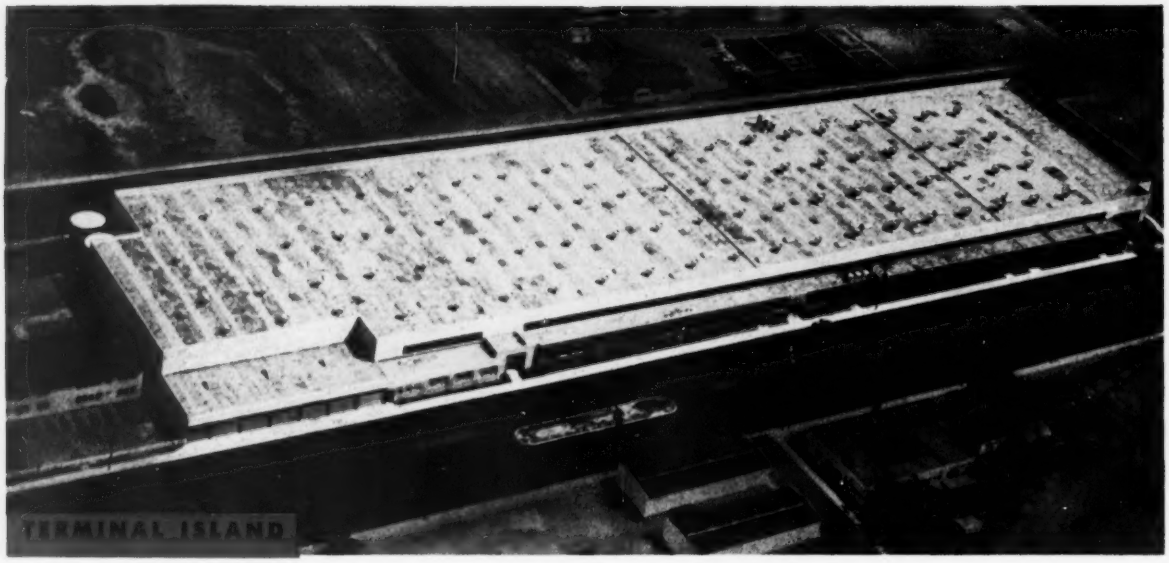
Service Offices:
530 West Sixth Street—Los Angeles 14, California
411 Yeon Building—Portland 4, Oregon
22 North San Joaquin—Stockton 5, California

Composed of the Following Companies:

The American Insurance Company • American Eagle Fire Insurance Company • The Continental Insurance Company
Fidelity-Phenix Fire Insurance Company • Firemen's Insurance Company • Glens Falls Insurance Company
The Hanover Fire Insurance Company

OFFICES THROUGHOUT THE UNITED STATES—CLAIMS AND SETTLING AGENTS THROUGHOUT THE WORLD

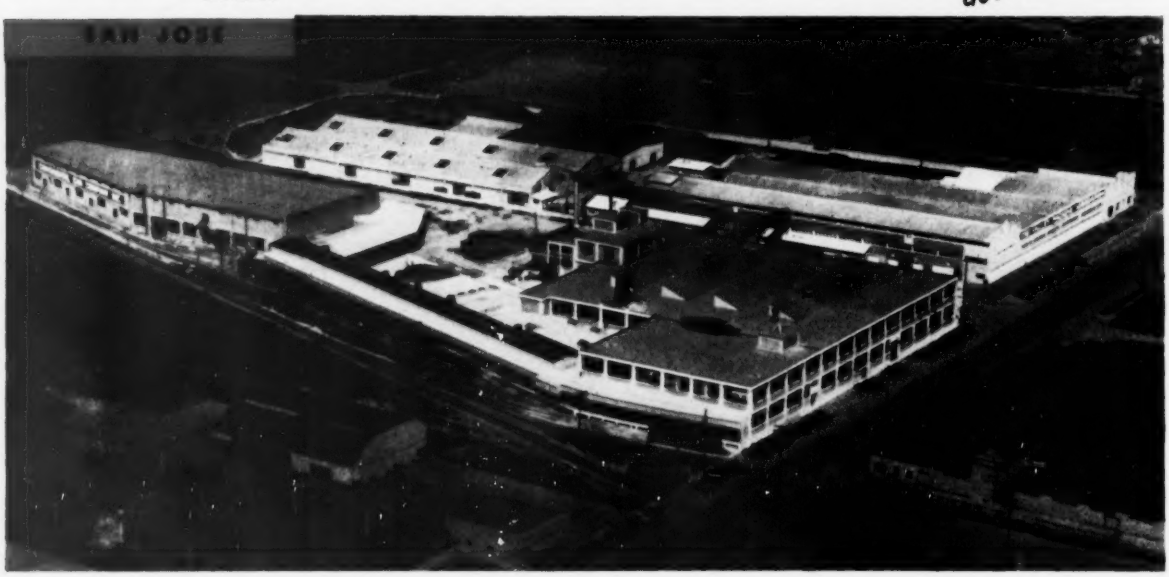


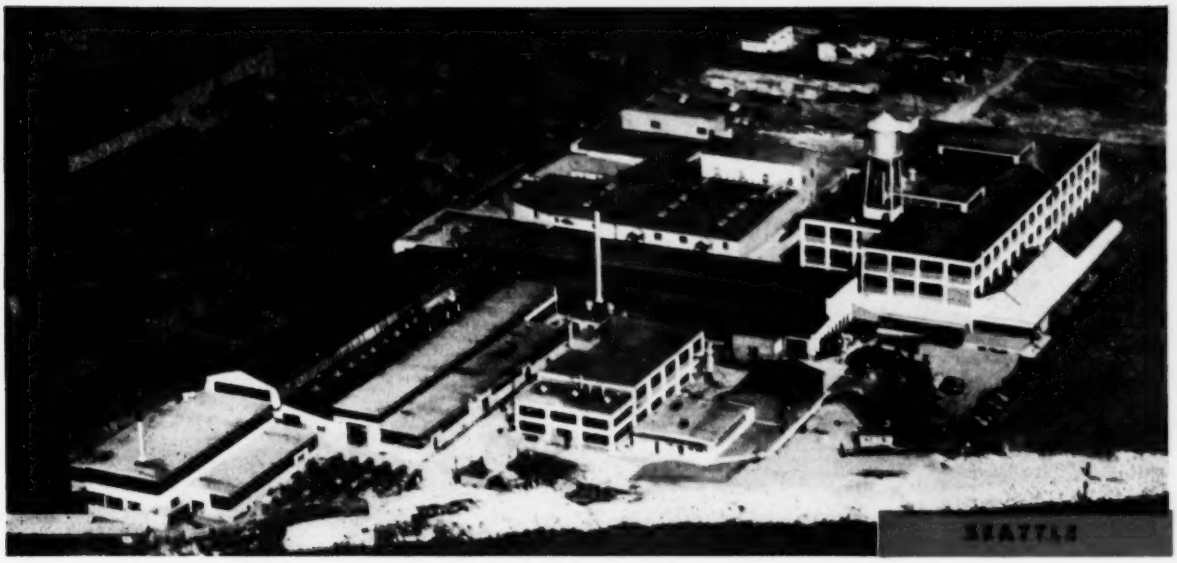
CONTINENTAL CAN COVERS THE COAST

Can Plants at... Seattle, Walla Walla, Portland, Sacramento, Stockton, San Jose, Terminal Island, Los Angeles, Oakland

Machinery Service at... Hayward, Whittier

Research Laboratories at... Seattle, Hayward, Whittier





A LOT OF FISH have come out of the Pacific —and the rivers flowing into it—since 1926. That was the year Continental opened its first coast plant to make cans for salmon, tuna and sardines. Today, there are nine Continental can-manufacturing plants in the West. Four of them, shown here, devote most or all of their production to cans for fish packers. Through the years Continental has matched the best in containers with the best in service. Our people travel a million miles each year to work with our customers and see that their filling, closing and other operations are at top efficiency.

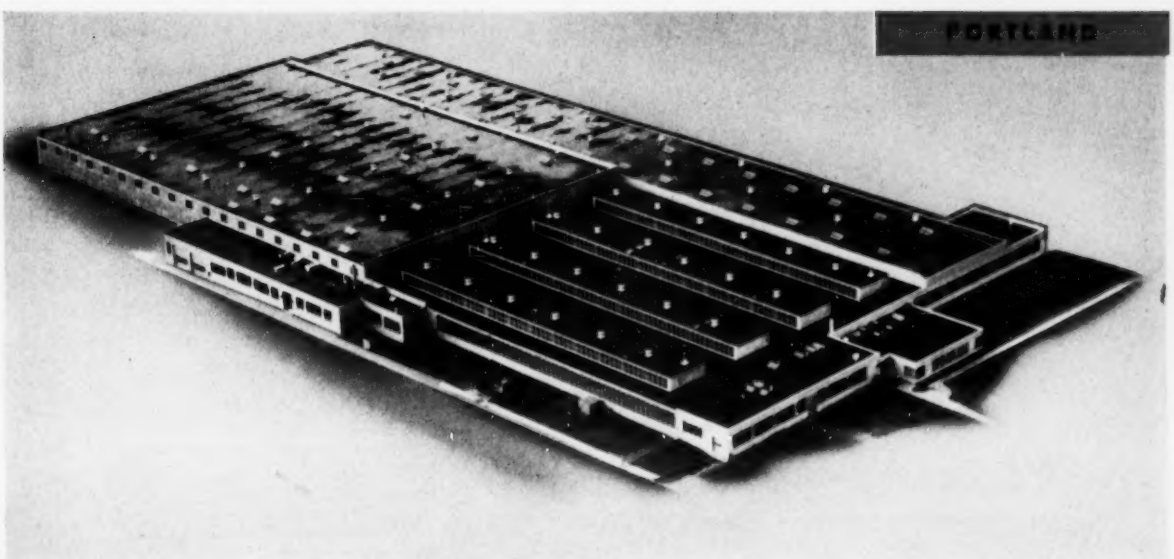
CONTINENTAL CAN COMPANY

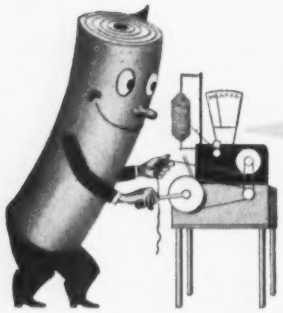
You can't beat Continental as a dependable source of supply!

1120 Wilshire Blvd.
Los Angeles 17

Russ Building
San Francisco 4

Skinner Building
Seattle 1





UNIFORMITY

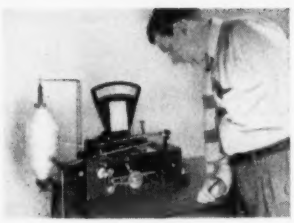
Makes the Big Difference

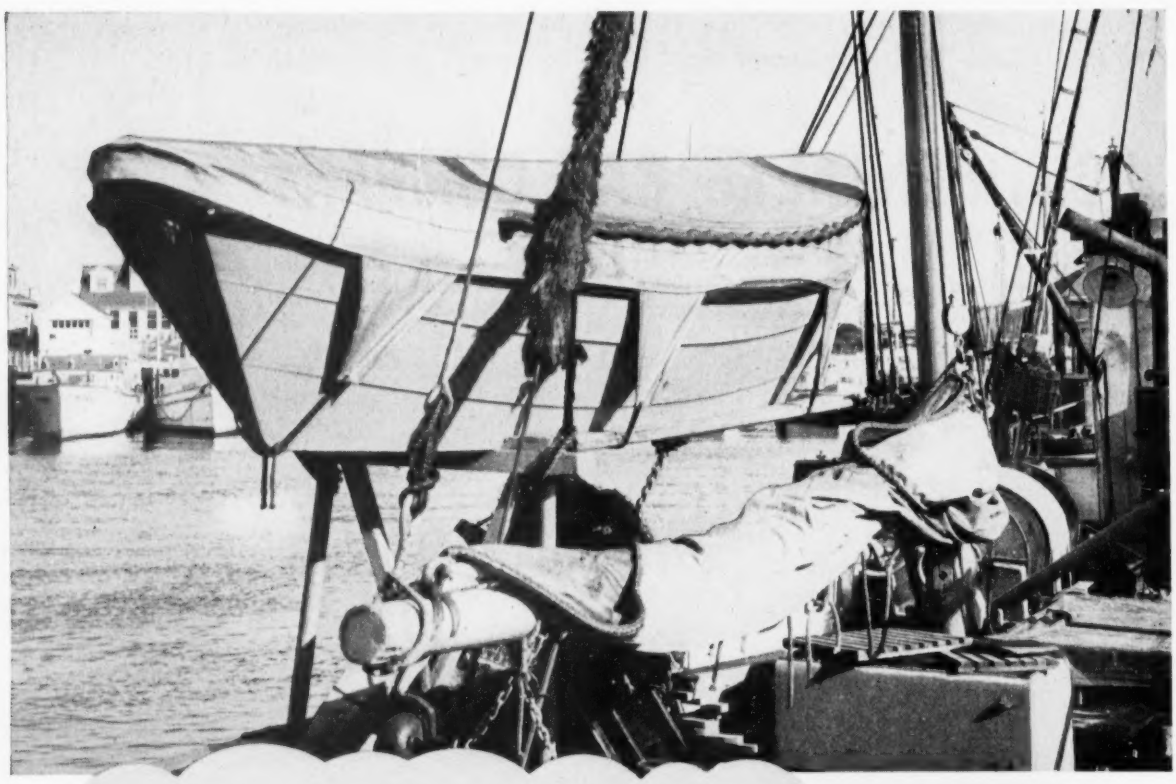
In BOAT COVER Fabrics

WOODBERRY EXTRA

Gives You Greater Fabric Uniformity

Checking evenness of roving with Belger Tester. One of a series of comprehensive laboratory controls throughout production to assure uniformity in all Mt. Vernon-Woodberry products.





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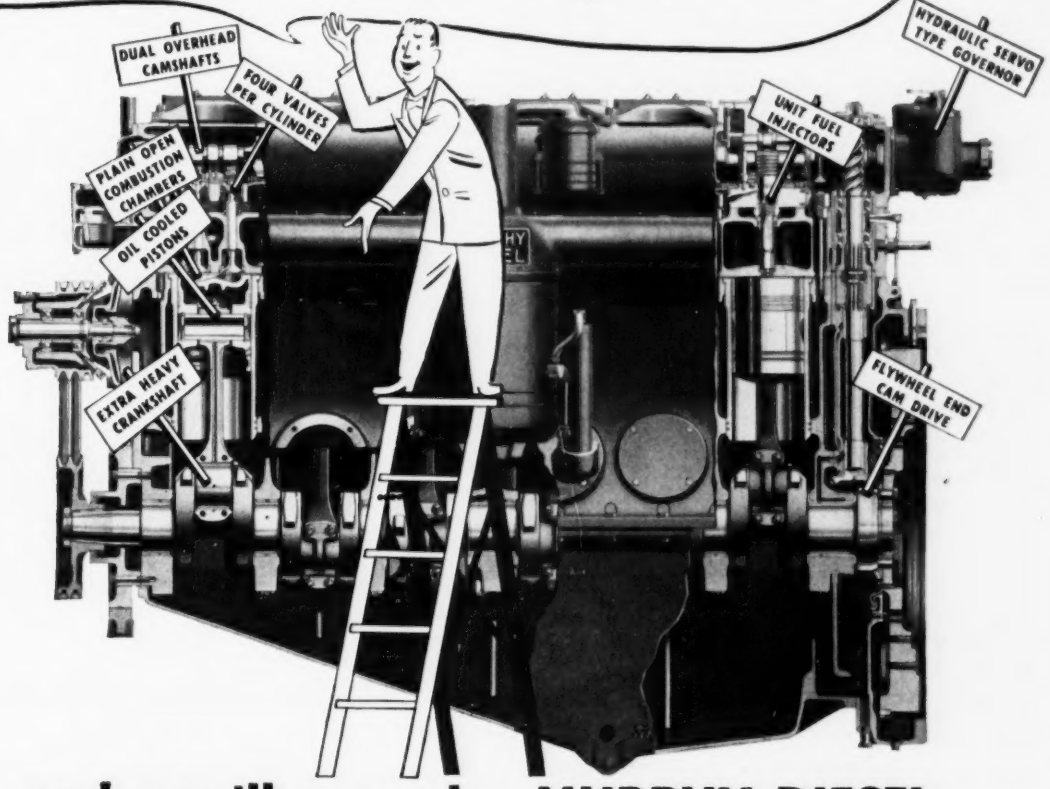
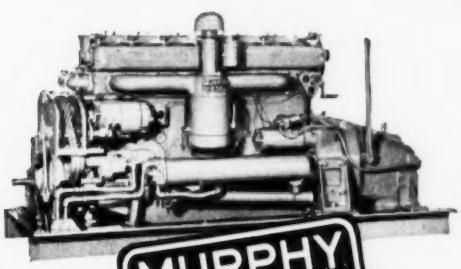


and you'll see why MURPHY DIESEL gives you more power, greater economy and longer engine life...



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***Heavy duty power* for fishing**

Murphy Diesel marine propulsion engines and auxiliaries are made in sizes from 90 to 205 H.P.; marine type generator sets from 60 to 140 K. W.

FOR the most part, engines look pretty much alike from the outside, but to really judge an engine you have to look inside. The Murphy Diesel isn't afraid of comparison. It offers a combination of proved design advantages available in no other engine. Check these features for yourself and ask Murphy Diesel owners—they'll tell you what these features mean in terms of good heavy-duty power, minimum fuel consumption and long engine life.

Additional information is given in the booklet, *"10 Questions to Ask a Diesel Engine Salesman"*. Ask your Murphy Diesel Dealer for a copy or write direct.

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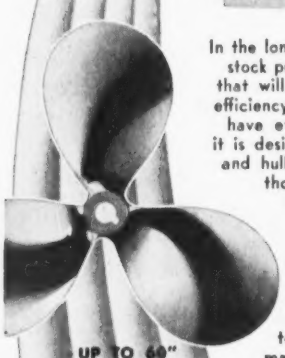

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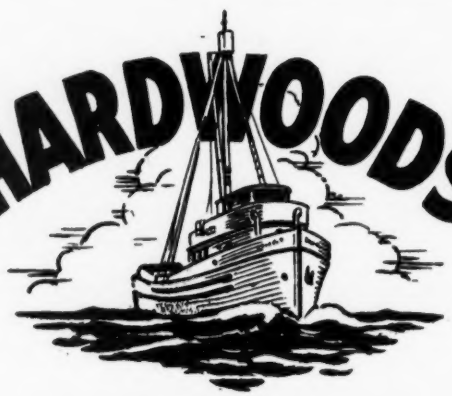

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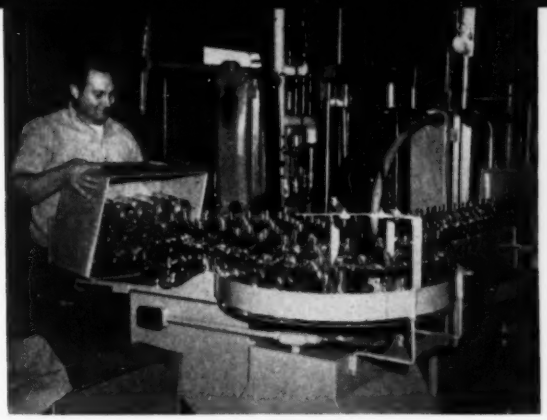

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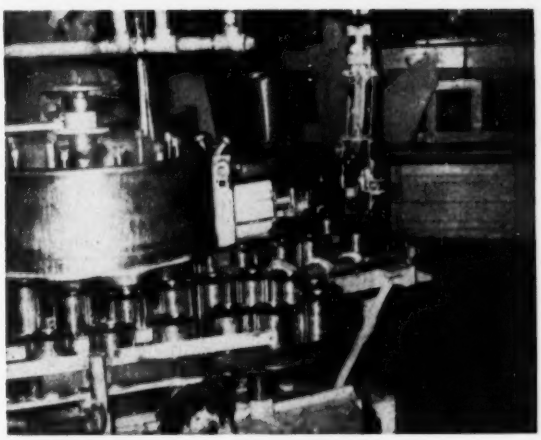

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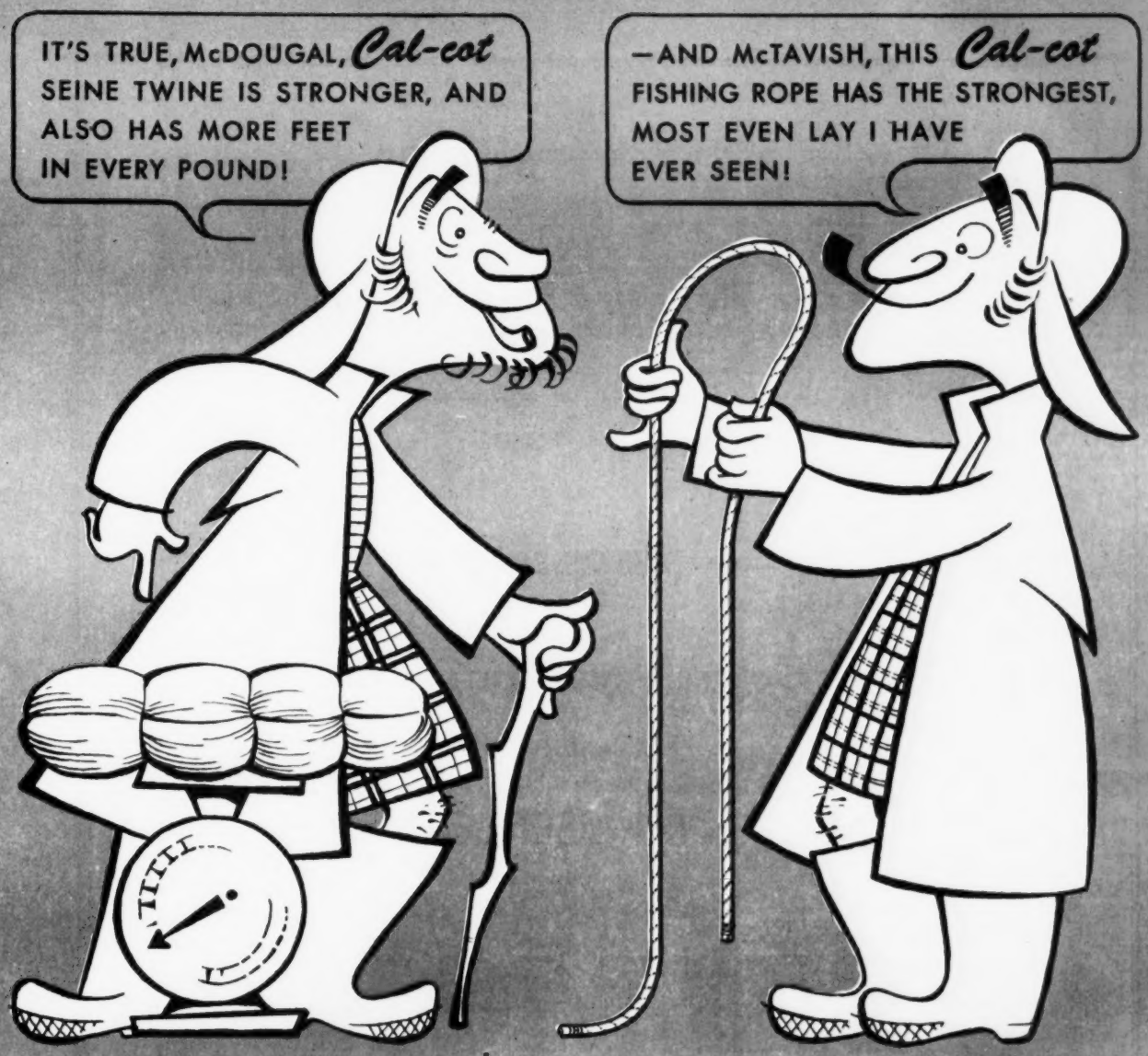
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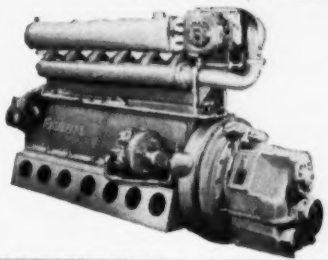
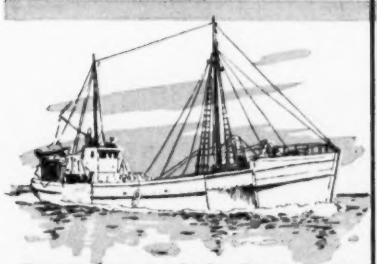


Model DMM-36
(with reverse reduction gear)

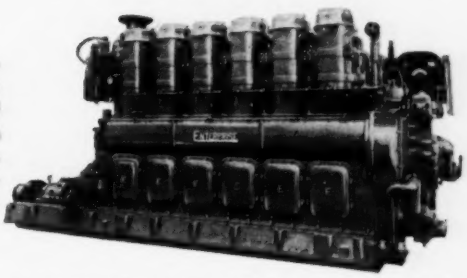
Enterprise M Series Diesels are built in 3, 4 and 6 cylinder models, 8" bore x 10" stroke. Turbocharging is available on 6 cylinder engine, as shown at left. Ratings in this series range from 68–400 HP at 450–800 RPM.

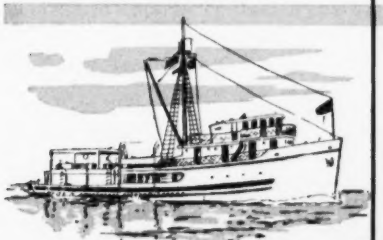


For trawlers, menhaden boats, purse seiners, cannery tenders, and other medium size craft.

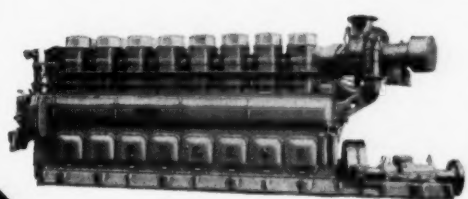
Model DMG-36

Series G Diesels, in 6 and 8 cylinders, furnish powerful, heavy-duty propulsion in a wide variety of marine services. Designed with 12" bore x 15" stroke, this series is rated 273–1388 HP at 250–600 RPM. Turbocharging available on all models.





For draggers, tuna clippers, fishery explorers, refrigerated carriers, whalers and other larger fishing craft.



Model DMQ-38

Largest in the Enterprise line, Series Q Diesels are built in 6 and 8 cylinder models, 16" bore x 20" stroke, normally aspirated and turbocharged. Conservatively rated 647–2056 HP at 250–375 RPM.

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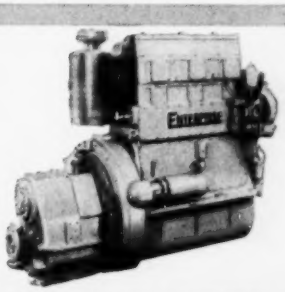

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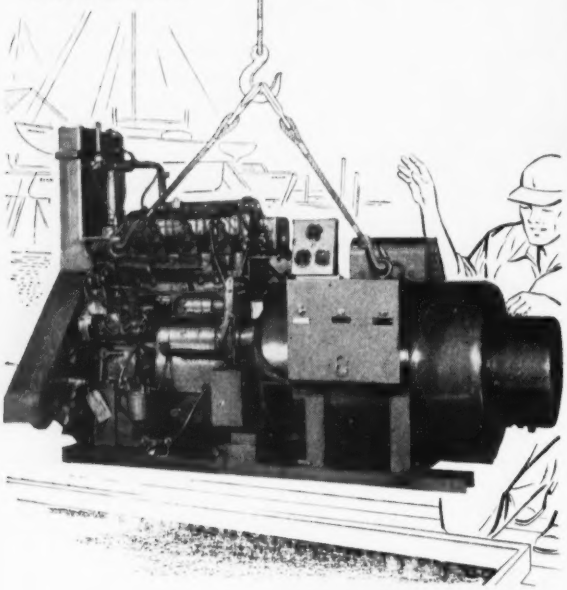

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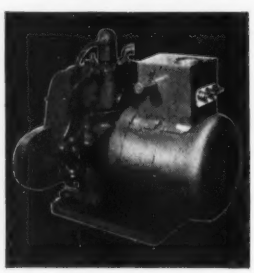

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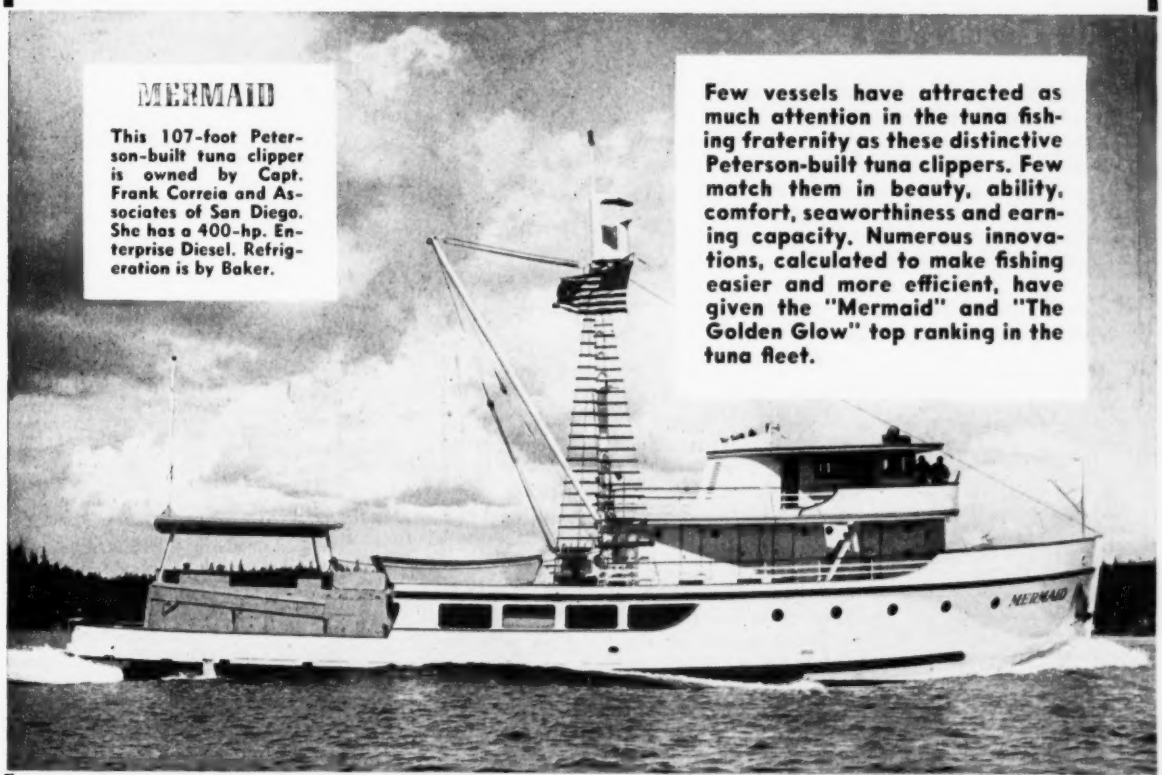

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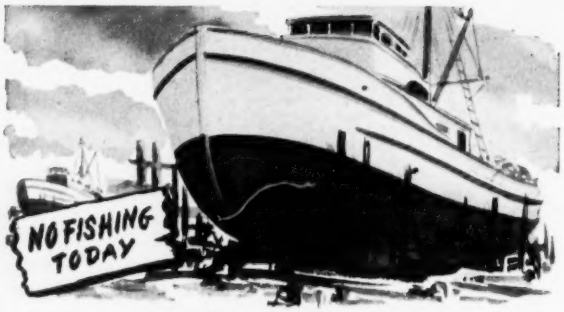

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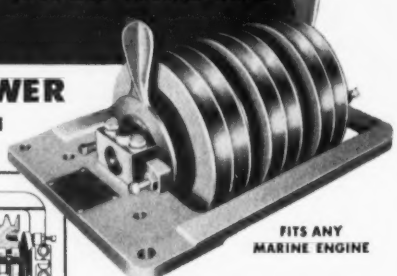

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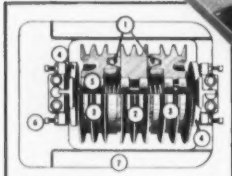

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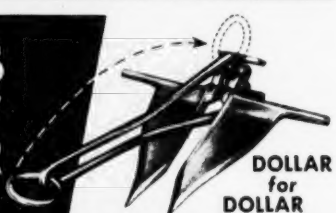

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There is a Benson Anchor designed by weight and size to meet your boat needs. For the fisherman who wants that last chance for a good catch before the storm, the Benson is the answer. Recovery is quick and sure. Make yours the anchor designed to "hold fast"—make yours a Benson.

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TRADE MARK

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Nordberg Marine Diesel Engines are built in a wide range of four-cycle types and sizes for the fishing industry . . . starting with a line of compact "packaged" power units for all auxiliary services, in sizes from 10 to 45 H.P. or 6 to 30 K.W. . . . on up through a full line of heavy-duty two and four-cycle Diesels for main propulsion ranging from 220 to over 10,000 H.P. *Write for details, outlining your power needs.*

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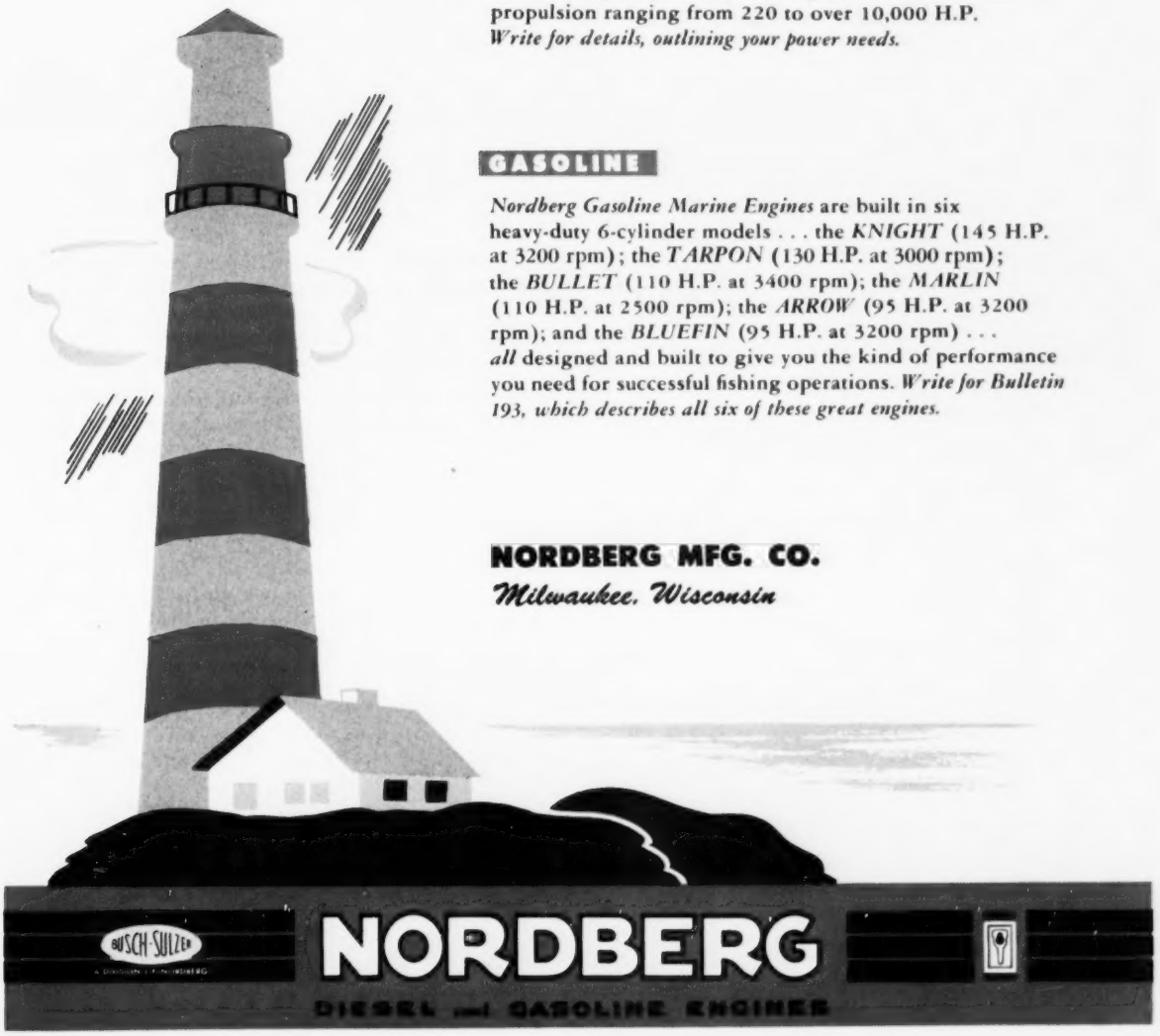

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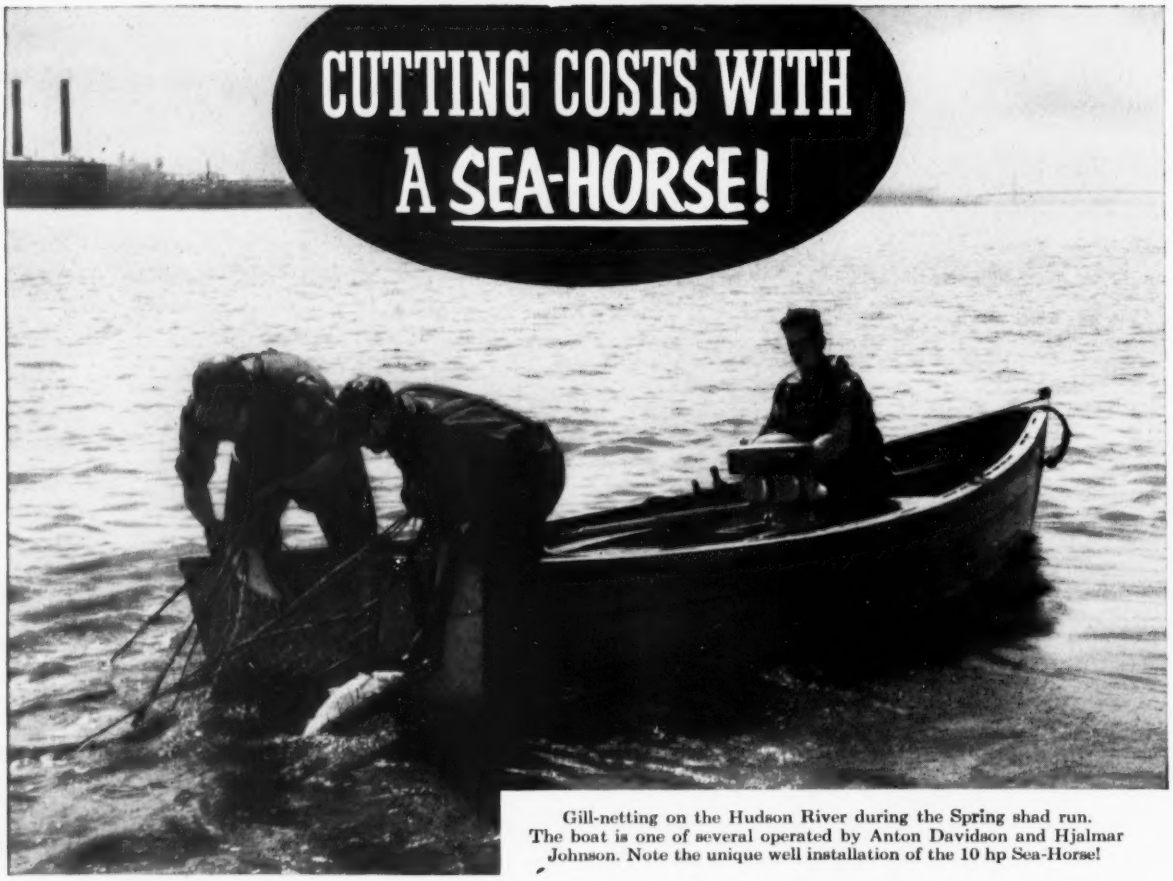

Gill-netting on the Hudson River during the Spring shad run. The boat is one of several operated by Anton Davidson and Hjalmar Johnson. Note the unique well installation of the 10 hp Sea-Horse!

SEA-HORSE 10 — New king-size value in outboards. Gear Shift, Mile-Master Fuel Tank, Synchro Twist-Grip Speed Control. Only **$275.00**

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Johnson SEA-HORSES
FOR DEPENDABILITY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

OFFICIAL

E. W. Allen

International Fisheries Commission, Fisheries Hall No. 2, University of Washington, Seattle 5, Wash. — Chairman, George W. Nickerson; Secretary; Edward W. Allen; Director of Investigations, H. A. Dunlop.

International Pacific Salmon Fisheries Commission, Dominion Building, New Westminster, B.C. — Chairman, Robert J. Schoettler, Seattle; Director of Investigations, Loyd A. Royal; Assistant Director, Roy I. Jackson.

L. A. Royal

M. B. Schaefer

Inter-American Tropical Tuna Commission, Scripps Institution of Oceanography, La Jolla, Calif. — Chairman, José L. Cardona-Cooper, San Jose; Costa Rica; Secretary, John L. Kask, Washington, D.C.; Director of Investigations, Dr. M. B. Schaefer.

Dominion of Canada, Department of Fisheries, 1110 West Georgia St., Vancouver, B.C. — Chief Supervisor of Fisheries, A. J. Whitmore; Assistant Chief Supervisor, F. Warne.

A. J. Whitmore

Pacific Marine Fisheries Commission, 340 State Office Building, 1400 S. W. Fifth Ave., Portland 1, Ore. —Chairman, Robert J. Schoettler; Vice Chairman, Robert L. Jones; Secretary, Richard S. Croker; Research Coordinator, John T. Gharrett.

J. T. Gharrett

Tuna Research Foundation, 19 Pine Ave., Long Beach, Calif.—Chairman, Albert Vignolo, Jr.; Director, E. L. Morris Statistician, W. Patrick Strauss.

United States Fish and Wildlife Service, Department of the Interior, Washington 25, D.C. — Director, Albert M. Day; Assistant Directors, John J. Kask and Clarence Cottam.

John L. Kask

U. S. F. A. W. S. Pacific Coast Offices

Regional Offices, Region One Swan Island, Portland 18, Ore.—Director, Leo L. Laythe; Assistant Directors, Samuel J. Hutchinson, Paul T. Quick.

Alaska Regional Office, Box 2021, Juneau, Alaska — Director, Clarence J. Rhode; Asst. Director, C. Howard Baltzo; Supervisor, Fishery Management, Richard F. Shulman; Supervisor of Enforcement, Dan H. Ralston.

Pacific Salmon Investigations, 2725 Montlake Blvd., Seattle 2, Wash. — Chief, Clinton E. Atkinson.

Salmon Cultural Laboratory, Entiat, Wash.—Chief, Roger E. Burrows.

Salmon Nutrition Laboratory, Fishery Center, University of Washington, Seattle 5, Wash.—Chief, John E. Halver.

South Pacific Fishery Investigations, 450-B Jordan Hall, Stanford, Calif.—Chief, John C. Marr.

Western Fishery Disease Laboratory, Fishery Center, University of Washington, Seattle 5, Wash.—Chief, Robert R. Rucker.

Fishery Products Laboratory, Ketchikan, Alaska.—Fishery Products Technologist in charge, John A. Dassow.

Fishery Market Development, Ketchikan, Alaska — Fishery Marketing Specialist, in charge, Fred W. Hipkins.

Market News Service, Post Office Bldg., San Pedro, Calif. — Fishery Market Specialist, in charge, Victor J. Samson.

Commercial Fisheries Statistics, Post Office Bldg., San Pedro, Calif.—Fishery Marketing Specialist, in charge, Carl B. Tendick.

Technological Laboratory, 2725 Montlake Blvd., Seattle 2, Wash. — Chemist in charge, Maurice E. Stansby.

Fishery Educational Service, 2725 Montlake Blvd., Seattle 2, Wash.
U. S. F. A. W. S. Pacific Coast Offices

Exploratory Fishing and Gear Development, 2725 Montlake Blvd., Seattle 2, Wash.—Fishery Methods and Equipment Specialist, in charge, Jos. Ellson.

Pacific Oceanic Fishery Investigations, P.O. Box 3830, Honolulu, T.H. — Director, Oscar E. Sette.

O. E. Sette

Market News Service, 421 Bell St. Terminal, Seattle 1, Wash.—Fishery Marketing Specialist in charge, C. M. Reardon.

Commercial Fishery Statistics, 421 Bell St. Terminal, Seattle 1, Wash. — Fishery Marketing Specialist, in charge, F. M. Wood.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

GENERAL

Territory of Alaska, Department of Fisheries, Box 350 Juneau, Alaska — Director, C. L. Anderson; Chairman, Alaska Fisheries Board, J. P. Valentine.

C. L. Anderson

Province of British Columbia, Provincial Department of Fisheries, Parliament Buildings, Victoria, B.C.—Minister, Hon. Ralph Chetwynd; Deputy Minister, George F. Alexander.

G. J. Alexander

State of California, Department of Fish and Game, Ferry Bldg., San Francisco, California. — Director, Seth Gordon; Marine Fisheries Branch, Richard S. Croker, Chief.

Seth Gordon

State of Oregon, Fish Commission, State Office Building, Portland 1, Ore. — Chairman, John C. Veatch; State Fisheries Director, Arnie J. Suomela; Director of Research, Fred G. Cleaver.

A. J. Suomela

State of Washington, Department of Fisheries, Smith Tower, Seattle 4, Wash. — Director, Robert J. Schoettler; Technical Coordinator, Milo Bell.

R. J. Schoettler

R. E. Walker

Fisheries Research Board of Canada, Ottawa, Canada — Pacific Sub-Executive Committee, R. E. Walker, Vancouver, Chairman; Dr. N. M. Carter, Director, Pacific Fisheries Experimental Station, Vancouver, Secreretary; Dr. J. L. Hart, Director, Pacific Biological Station, Nanaimo.

Fisheries Research Institute, Fisheries Hall No. 2, University of Washington, Seattle 5, Wash. — Director, Dr. William F. Thompson.

W. F. Thompson

Pacific Fishery Biologists, Fisheries Center, University of Washington, Seattle, Wash. — President, Leon A. Verhoeven, University of Washington; Secretary-Treasurer, William A. Smoker, Washington Department of Fisheries, Seattle.

L. A. Verhoeven

Pacific Fisheries Technologists, P. O. Box 939, Vancouver, B. C. —President Norman Armstrong; Secretary-Treasurer, W. H. Lautz.

Norman Armstrong

Pacific Fisheries Conference, 71 Columbia St., Seattle 4, Wash. — Chairman, Miller Freeman; Vice-Chairman, Edward W. Allen; Secretary, Montgomery Phister.

R. Van Cleve

School of Fisheries, University of Washington, 204 Fisheries Center, Seattle 5, Wash. — Director, Dr. Richard Van Cleve.

OPERATORS

Association of Pacific Fisheries, 200 Colman Bldg., Seattle 4, Wash. — President, Vance F. Sutter; Secretary, Dr. E. D. Clark.

V. F. Sutter

F. Gunderson

Alaska Salmon Industry, Inc., 200 Colman Bldg., Seattle 4, Wash. —President, Fred Gunderson; Managing Director, W. C. Arnold.

California Fish Canners Association, Ferry Bldg., Terminal Island, Calif. — President, M. J. Gorby; Vice-President, J. S. DeSilva, Jr.; Executive Vice-President and General Manager, R. H. Beaton; Secretary-Treasurer, G. H. Clark.

M. J. Gorby

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

Columbia River Salmon & Tuna Packers Association, P.O. Box 60, Astoria, Ore. — Executive - Secretary, James H. Cellars.

J. H. Cellars

Fisheries Council of Canada, Suite 33, 46 Elgin St., Ottawa, Ontario.— President, R. G. Smith, c/o National Sea Products, P.O. Box 280, Halifax, N.S.

Fisheries Association of British Columbia, Room 510, Shelly Bldg., 119 West Pender St., Vancouver, B.C. — Chairman, J. M. Buchanan; Secretary, John Macdonald; Executive Assistant to the Chairman, A. H. Sager.

J. M. Buchanan

S. Sollecito

Monterey Fish Processors Association, Box 1424, Monterey, Calif. — President, Sebastian "Buster" Sollecito; Vice - President, Bernard Kitchens; Secretary-Treasurer, Paul Jepson.

National Canners Association, Northwest Branch, 826 Skinner Bldg., Seattle, Wash. — Director, Dr. E. D. Clark; Chemist and Assistant Director, Dr. R. W. Clough; Chemist, Dr. G. Ivor Jones; Chemist, O. E. Shostrom.

E. D. Clark

National Canners Association, 1133 20th St., N. W. Washington 6, D. C.— President, Louis Ratzesberger, Jr.; Secretary, Carlos Campbell; Director, Fishery Products Division, Charles R. Carry.

C. D. Alhadeff

National Fisheries Institute, 1614 Twentieth St., N.W. Washington 9, D.C.— President, Charles D. Alhadeff; General Manager, Charles E. Jackson.

Northwest Fisheries Association, 4 Ferry Dock, Seattle 4, Wash. —President, Wm. B. Hall; Vice-President, H. W. Gorham; Secretary, R. F. Syverson; Treasurer, J. G. Blasingame; Executive Secretary, Charles R. Pollock.

W. B. Hall

Jack Lind

Northwest Salmon Association, Colman Building, Seattle, Wash. — President, Jack Lind; Vice-President, Chas. Turner; Secretary, Jack Brennan.

Olympia Oyster Growers Association, P. O. Box 313, Olympia, Wash. Vice-President, P. D. Northcraft; —President, Burton J. Bowman; Secretary-Treasurer, Earl R. Brenner.

Pacific Coast Clam Packers Association, 508 Colman Building, Seattle, Wash. — President, G. P. Halferty; Secretary, L. J. Hawkinson.

Pacific Herring Packers Association, 2408 Commodore Way, Seattle 99, Wash.—President, J. R. Jacobson; Secretary, Leif Eriksen.

Mason Case

Pacific Coast Fish Producers Institute — Chairman, Mason Case, Moss Landing, Calif.; Director, Fred Wolleson; Secretary - Treasurer and Washington Coordinator, Harold Lokken; Alaska Coordinator, Thor Hendriksen; Southern California Coordinator, Charles L. White.

Pacific Coast Oyster Growers Association, Room 4, Ferry Dock, Seattle 4, Wash. — President, Malcolm B. Edwards; Vice-President, R. H. Bailey; Secretary - Treasurer, Charles R. Pollock.

M. B. Edwards

Prince Rupert Wholesale Fish Dealers Association, P. O. Box 70, Prince Rupert, B. C. — Secretary, George Dybhavn.

Puget Sound Salmon Canners, Inc., 304 Spring Street, Seattle, Wash. — President, John Plancich; Vice-President, Harald Synnestvedt, Jr.; Treasurer, Norman E. Weitkamp; Executive Secretary, Herald A. O'Neill.

John Plancich

Santa Cruz Fisheries Association, Santa Cruz, Calif.—President, Cotardo Ghio; Manager, Robert Gheio.

Vancouver Fish Exchange, N. H. B. Fish Dock, Vancouver, B. C. — Secretary, H. M. D. Lambe; Chairman, S. Humphries.

Vancouver Wholesale Fish Dealers Association, Foot of Campbell Ave., Vancouver, B. C.—Secretary, A. E. Lanyon.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

VESSEL OWNERS

Alaska Native Brotherhood, Juneau, Alaska — Grand President, Harry Douglas, Hoonah; Grand Secretary, Al Willand, Juneau.

Alaska Herring Skippers Association, 800 American Bldg., Seattle 4, Wash. — President, Bernt Gjerde; Business Manager, G. Bradley Dalton.

G. T. Greenwell

Fishermen's Co-operative Association, 2195 Commissioner St., Vancouver 6, B. C. — President, Robert McKay, Secretary - Treasurer, Karl Dybhavn; General Manager, George T. Greenwell.

Richard Blendheim

Ketchikan Fishing Vessel Owners Association, Ketchikan, Alaska — President, Richard Blendheim.

American Tunaboat Association, 1 Tuna Lane, San Diego 1, Calif.— General Manager, Harold F. Cary; Director of Research, Dr. Wilbert M. Chapman.

H. F. Cary

Fishermen's Marketing Association of Washington, Pier 59, Seattle, Wash. — President, Carl Serwold; Secretary, Nick Kulgis.

Nick Kulgis

Lower California Fisheries Association, 935 West Harbor Drive, San Diego 1, Calif. — President, Anthony S. Chiappe; Business Manager, J. J. Camillo.

J. J. Camillo

John Real

Fishermen's Co-Operative Association, Berth 73, San Pedro, Calif. President, Tony Barcott; Vice-President, John Zankich, General Manager, John Real.

H. A. Christenson

Fishing Vessel Owners Association of British Columbia, 193 E. Hastings Street, Vancouver, B. C. — President, Capt. George T. Brajcich; Secretary - Manager, Harold A. Christenson.

Massett Cooperative Association, 2195 Commissioner St., Vancouver 6, B. C.—President, Noel Taylor; Secretary, George A. Hawkes.

Monterey Fishermen's Association, Monterey, Calif.—President, Leonard Goulart; Secretary-treasurer, George Rose.

Fishermen's Co-Operative Association, Pier 55, Seattle, Wash. — President, John A. Olsson, Vice-President, Harry McCool, Secretary - Treasurer, B. G. Johnston.

B. G. Johnston

Fishing Vessel Owners Association, Pier 59, Seattle, Wash. — President, Sig Hendricks; Manager, Harold E. Lokken.

H. E. Lokken

Monterey Purse Seine Association, 9 Municipal Wharf, Monterey, Calif. — President, Frank J. Cardinale; Vice-President, Sal Colletto; Secretary, Horace Balbo; Treasurer, John G. Spadero.

F. J. Cardinale

Fishermen's Marketing Association, Carson Bldg., Eureka, Calif.—President, Manuel Figueretto, Fort Bragg; Secretary, Noel Franklin, Eureka.

Fishermen's Co-Operative Federation, 2195 Commissioner St., Vancouver 6, B. C.—President, Martin K. Eriksen, General Manager, T. H. Sorensen, Secretary, D. G. Macdonald.

Juneau Fishing Vessel Owners Association, Box 668, Juneau, Alaska—President, John Lowell; Secretary-Treasurer, Edmund Krause.

LaConner Fishermen's Cooperative Association, LaConner, Wash.—Secretary-Manager, William Alvord.

Karl Leitch

Northern Fishing Vessel Owners Association, Sitka, Alaska — President, Karl Leitch; Secretary, Myrth Sarvela.

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

Off-Shore Fishing Vessel Owners Association, P. O. Box 838, 51 Ninth St., Astoria, Ore. — President, Fred Wolleson; Treasurer, Veikko Romppanen.

F. Wolleson

Purse Seine Vessel Owners Association, 5301 North Ruby St., Tacoma, Wash.—President, Jack Repanich; Secretary, Nick Mladinich.

J. Repanich

Southern California Fishermen's Association, 418 Harbor Lane, San Diego, Calif. — President, Victor Nigro; Vice-President, J. Oliveri; Secretary-Treasurer, C. J. Alexander.

Victor Nigro

A. Edwards

Pacific Coast Purse Seiners' Association, Pier 59, Foot of Pike Street, Seattle 1, Wash. — President, Arthur Edwards; Vice-President, Mike Castelan; Secretary, Conrad Ness.

Chas. White

San Diego Commercial Fishing Boat Owners, Inc., Box 468, Point Loma Station, San Diego 6, Calif. — President, Charles L. White; Secretary - Treasurer, James M. Lytle.

Wm. Wagner

Southern California Commercial Fishing Boat Owners, Inc., 5355 E. Fourth, Long Beach, Calif. — President, William J. Wagner.

Prince Rupert Fishermen's Cooperative Association, P.O. Box 1580, Prince Rupert, B.C.—President, Martin Eriksen; Secretary and Manager, K. F. Harding.

M. K. Eriksen

FISHERMEN AND CANNERY UNIONS

Alaska Fish Cannery Workers Union, 212 Fifth Ave. South, Seattle, Wash.

Alaska Fishermen's Council, Anchorage, Alaska — President, A. A. Owen.

Alaska Fishermen's Union, 84 Union St., Seattle — Secretary-Treasurer, George Johansen.

Cannery Workers Union of the Pacific, AFL, 450 Seaside Avenue, Terminal Island, Calif. — President, James Waugh.

Jas. Waugh

H. Helland

The Prince Rupert Fishing Vessel Owners' Association, P. O. Box, Prince Rupert, B.C.—President, Harold Helland, Secretary, Hans Petersen.

William Peters

Alaska Marine District Union, A. F. L., Sitka, Alaska — President, William Peters; Executive Secretary - Treasurer, Peter C. Nielsen.

Puget Sound Gillnetters Association, Everett, Wash.—President, Joe Burrows; Vice-President, Frank Riley; Secretary-Treasurer, William F. Fortson.

San Francisco Purse Seine Vessel Owners Association, 350 Jefferson St., San Francisco 11, Calif.—President, Guiseppe Torrente; Vice-President, Frank Gandolfo.

Cannery Workers & Fishermen's Union, 640 State St., San Diego 1, Calif. — Secretary-Treasurer, Lester Balinger.

R. J. Hicks

Columbia River Fishermen's Protective Union, 166 Tenth St., Astoria, Ore.—President, Roy Takalo; Executive Secretary, Robert J. Hicks.

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TIDE WATER ASSOCIATED OIL COMPANY (Western Division)

DIRECTORY

Pacific Fisheries Organizations

(Data as of Jan. 1, 1953)

Deep Sea Fishermen's Federal Union of B. C., Prince Rupert, B. C.—President, Ole Kildal; Secretary, W. H. Brett.

Deep Sea Fishermen's Union of the Pacific, 5215 Ballard Ave., Seattle, Wash. — Secretary-Treasurer, Harold Grotle; Seattle Agent, Paul Sather; Ketchikan Agent, Helge Pedersen; Juneau Agent, Milton Nyman; Petersburg Agent, Lewis J. Seversen.

Geo. Issell

Fish Cannery Workers and Fishermen's Union of the Pacific, 257 Fifth St., Richmond, Calif. — Secretary-Treasurer, George Issel; Assistant Secretary-Treasurer, Charles F. Snyder. San Francisco Branch, 16th and Capp Sts.; Moss Landing Branch, Box 97, Moss Landing, Calif.

Fishermen & Allied Workers, UILW, Local 3-33, 339 W. 7th St., San Pedro, Calif. — Secretary, Anthony Sokolich.

Fisheries Division, International Longshoremen's & Warehousemen's Union, 150 Golden Gate Avenue, San Francisco, Calif.—Secretary, Jeff Kibre. Regional Offices: Southern California, Director, William Lawrence, 5851 Avalon Blvd., Los Angeles, Calif.; Northern California, Director, William Chester, 150 Golden Gate Ave., San Francisco, Calif.; Northwest and Alaska, Director, William Gettings, 84 Union St., Seattle, Wash.

Local 3, Secretary, Robert Cummings, 84 Union Street, Seattle, Wash.

Local 16-C, Secretary, Dorothy Bigornia, Cannery Workers, Box 1195, Juneau, Alaska.

Local 22 Secretary, Dorothy Hofstad, Cannery Workers, Petersburg, Alaska.

Local 23 Secretary, W. A. Hastie, 401 North Clark St., Aberdeen, Wash.

Local 30 Secretary, W. M. McCall, Box 379, Ketchikan, Alaska.

Local 33 Secretary, Anthony Sokolich, 339 West 7th St., San Pedro, Calif.

Local 36 Secretary, John Pastorino, 2907 Jones St., San Francisco, Calif.

Local 37 Secretary, Matias L. Lagunilla, Alaska Cannery Works, 213 Main St., Seattle, Wash.

Local 38 Secretary, Mildred Gesler, 17 Commercial St., Eureka, Calif.

Local 42 Secretary, Frank Phillips, Box 816, North Bend, Oregon.

J. R. Brown

Local 44—President, John R. Brown; Secretary, Earl Jewell, 2409 Grant St., Bellingham, Wash.

Local 61-C Cannery Workers, Box 1535, Ketchikan, Alaska.

Local 64, Secretary, Flora Mather, Metlakatla, Alaska.

Local 65 Secretary, Edith Bean, Hoonah, Alaska.

Local 69 Secretary, Irene Pruett, United Shellfish Workers of Alaska, Box 2214, Ketchikan, Alaska.

Jack Elliott

Local 36 Secretary, John Pastorino, 2907 Jones St., San Francisco, Calif.; President, Jack Elliott.

Monterey Cannery Workers Union, A. F. of L., Monterey, Calif.—President, Joseph Perry, Jr.; Secretary-Treasurer, Roy Humbracht; Business Agent, Lester A. Caveny.

Paul E. Graves

Otter Trawlers Union, Astoria — President, F. J. McSwain; Secretary - Treasurer, Paul E. Graves.

Seine & Line Fishermen's Union of L. A., 261 West 7th St., San Pedro, Calif. — Business Agent-Secretary, John Calise.

Seine and Line Fishermen's Union of Monterey, 233 Alvardi St., Monterey, Calif. — President, Thos. P. Flores; Secretary - Business Agent, John Crivello.

Reg Payne

United Fishermen and Allied Workers Union, 138 East Cordova, St., Vancouver, B. C.—President, Reg Payne; Secretary, Homer Stevens; Business Agent, Alex Gordon.

United Fishermen of Alaska, A.F.L., P. O. Box 47, Kodiak, Alaska—President, Vivan Kilgore; Secretary, P. J. Kerrigan.

Andy Barlow

United Trollers of Alaska, Local 100, CIO, Box 2199, Juneau, Alaska — Executive Secretary-Treasurer, Andy Barlow.

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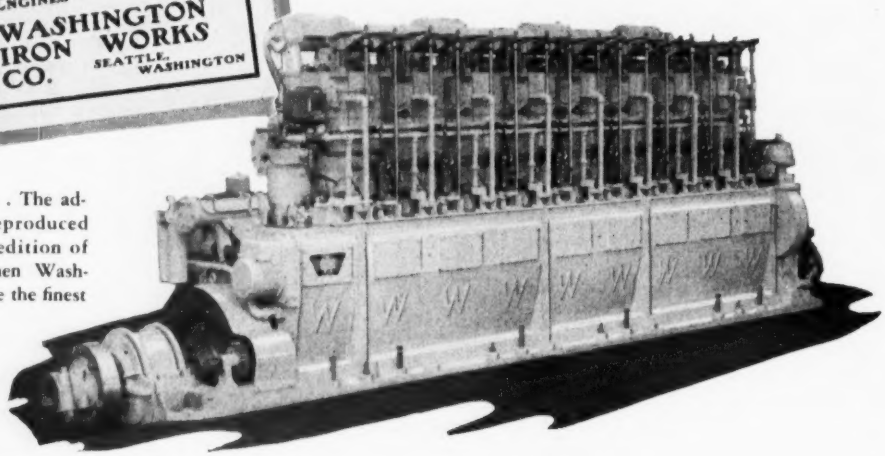
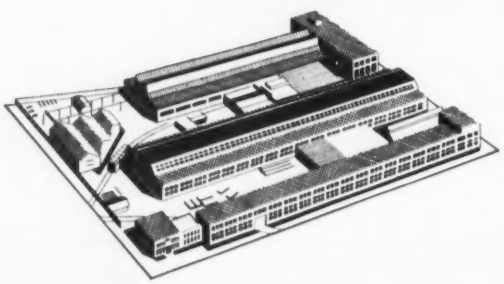
1903: STEAM HOIST . . . The advertisement above is reproduced from the first annual edition of "Pacific Fisherman," when Washington steam engines were the finest available.

IN 1882, the Washington Iron Works started serving the needs of the Pacific Northwest and Alaska for heavy machinery, including the needs for specialized equipment of the then infant commercial fisheries industry. By the turn of the century, Washington equipment for the marine field already enjoyed an established reputation.

In 1922, the first Washington diesel was installed to propel a fishing vessel—an engine still in commercial service today. Washington diesels now power many of the largest and finest Pacific Coast fishing vessels, with an unsurpassed record for unfailing dependability and long life.





1953: MODERN DIESEL . . . Today's Washington diesel engines are designed and painstakingly crafted for efficiency and dependability over years of service in marine propulsion and auxiliary use. They are made in an eight-acre, modern plant, with complete facilities under one roof for designing, engineering, pattern making, iron and steel casting, metallurgical testing, forging, welding, machining and fabricating.

Like the Washington diesel in the marine field, Washington logging equipment, presses for pulp, plywood and hardboard, cranes and other industrial equipment are each outstanding products of their type.

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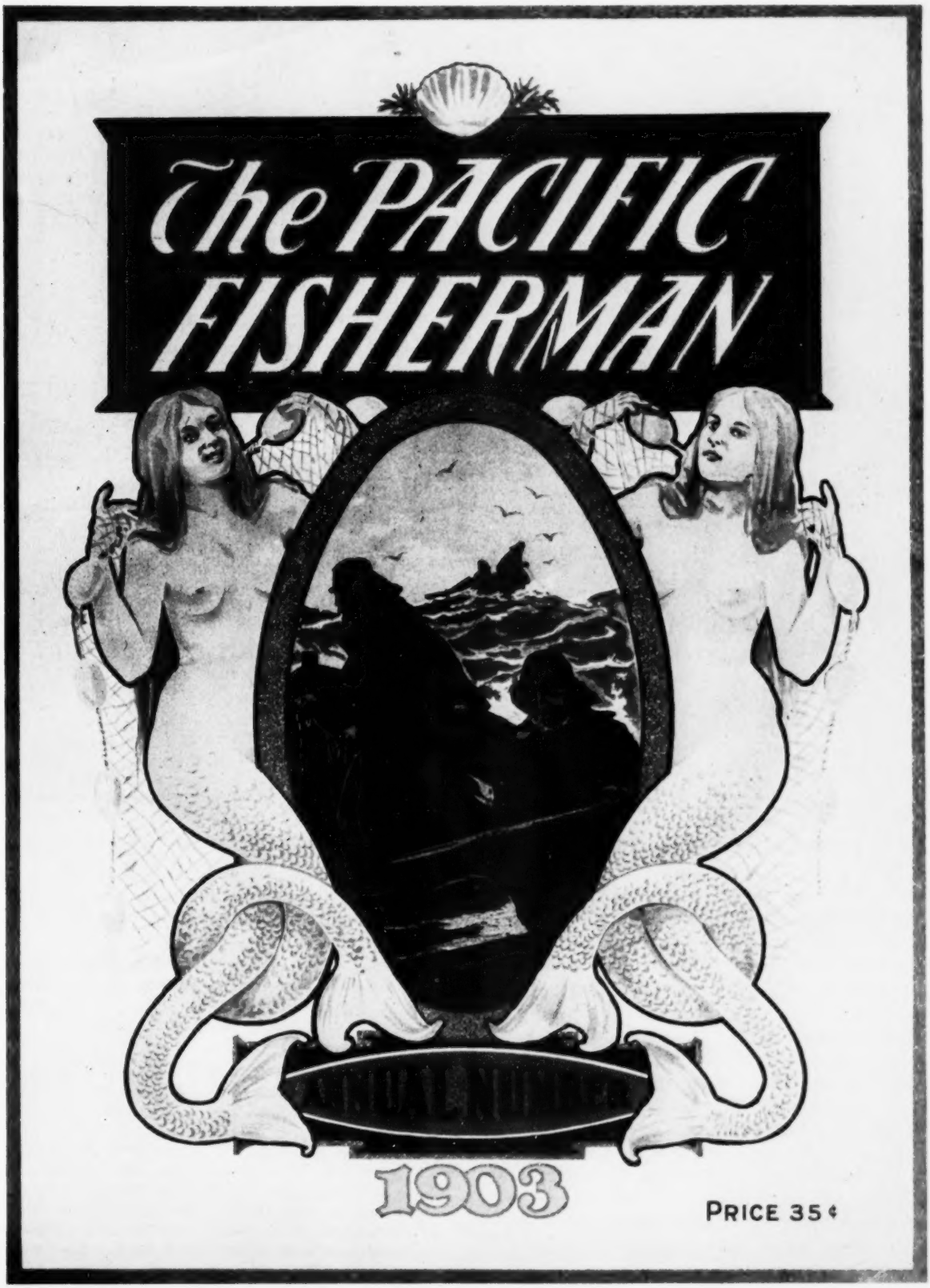
The First Yearbook



50 Years of Growth

FIFTY years of growth in the fisheries of the Pacific cover millions of tons, hundreds of millions of dollars, an ocean that is half the world—and half a century of time.

The story of 50 years of growth in the fisheries of the Pacific, stripped to its essentials of fact and figures, has required 50 volumes such as this—and 50 more, each far larger, for the fuller telling.

But the picture of this growth can be drawn from the comparison of *Yearbook No. 1*, that of 1903, with the *Yearbook of 1953*.

Here we sketch that pattern of contrast by an examination of the first Yearbook, knowing that from the comparison will come a comprehending of the growth of 50 years.

Editorial No. 1

"WITH this edition we present to our readers our first annual number. In this we believe it can be truthfully said we have the finest edition of any trade paper ever issued on the Coast. The articles contained herein were all specifically prepared for this issue, and will be found very interesting and valuable. In this connection we desire to thank all of our contributors who have given us so much time and taken great care in preparing these articles in order that this number might be a success and credit to the fishing industry of this Coast. In reference to our tables we desire to extend thanks to the many cannery officials who have so courteously furnished us with data and figures . . . The figures on the Alaska pack are complete. Out of the total number of canneries operating, not one refused to furnish us a report."

—Pacific Fisherman
Yearbook, 1903

(EDITOR'S NOTE—The operator-cooperation in providing pack data of individual companies to this day remains the outstanding feature of the *Pacific Fisherman Yearbook*, and is our best reward—that for 50 years we have been accorded the confidence of this industry and permitted to publish in this *Yearbook* its individual pack reports. We know of no other instance in the full field of industrial publishing where such confidence in a journal is so concretely expressed.)

ALASKA PACKS—1902-1903.

NAME OF CANNERY.	LOCATION	OWNED BY	ADDRESS	KING 1903 Talls	KING 1903 Flats	KING 1902	RED 1902 Talls	RED 1902 Flats	RED 1902	COHOE 1903	COHOE 1902	HUMPBACK & CHUM 1903	HUMPBACK & CHUM 1902	TOTALS 1903	TOTALS 1902	TOTALS 1901
Nushagak (4)	Nushagak River.	Alaska Pk. Assn.	S. Francisco, Cal.											.....	209,811	180,080
Naknek (2)	Naknek River...	"	"											.....	122,744	75,420
Ugashik (2)	Ugashik River...	"	"											.....	72,609	49,564
Koggiung (3)	Kvichak River..	"	"											.....	192,820	107,845
Igagik	Igagik River....	"	"											.....	31,375	21,740
Chignik	Chignik River...	"	"											.....	60,155	40,881
Alitak	Kadiak Isd.....	"	"	22,999	1,744	24,441	1,015,342	.....	1,067,197	49,383	28,533	178,225	162,024	1,267,093	45,145	41,014
Karluk (2)	Kadiak Isd.....	"	"											.....	204,190	196,667
Kussilof	Cooks Inlet....	"	"											.....	41,455	31,082
Odiak	Prince Wms Sd..	"	"											.....	45,488	40,665
Pyramid Harbor	Lynn Canal.....	"	"											.....	32,211	30,709
Wrangel	Pt. Highfield....	"	"											.....	64,197	59,627
Loring	Loring	"	"											.....	96,897	89,423
Orca	Prince Wms Sd.	P. P. & Nav. Co.	Seattle, Wn.....											35,081	42,000	25,516
Chignik (2)	Chignik Bay....	"	"											60,854	73,000	65,443
*Kenai	Cooks Inlet....	"	"											1,888	29,500	17,925
Henter Bay	Prince of W. Isd.	"	"											49,077	55,333	62,000
Uyak Bay	Kadiak Isd.....	"	"											36,221	80,000	84,072
Nushagak	Nushagak River.	"	"											64,704	73,000	76,774
Quadra	Quadra Bay.....	"	"	5,176	.....	.....	261,039	.....	427,216	24,812	20,889	76,346	235,259	no	39,000	35,141
Petersberg	Wrangel Narr's.	"	"											no	42,990	55,500
Sitkof	Sitkof Bay.....	"	"											25,869	49,003	60,000
Dundas	Dundas Bay.....	"	"											25,016	29,860	21,750
Taku	Taku River.....	"	"											24,952	31,000	28,574
Chilkoot River	Lynn Canal.....	"	"											24,648	30,308	19,397
Santa Ana	Earnest Sound..	"	"											no	33,452	51,519
Yes Bay	Behm Canal.....	"	"											15,032	32,000	29,736
Kvichak	Kvichak River..	No. Alas. S. Co.	S. Francisco, Cal.	.....	.....	98	70,000	.....	68,734	.....	.....	.....	649	70,000	69,471	46,700
Nushagak	Nushagak River.	"	"	750	.....	.....	18,550	.....	.....	.....	.....	1,200	.....	20,500	no	no
Igagik	Igagik River....	"	"	.....	.....	.....	24,700	.....	.....	.....	.....	.....	.....	24,700	no	no
Naknek	Naknek River....	Naknek P. Co..	"	.....	.....	.....	44,000	.....	40,000	.....	.....	.....	.....	44,000	40,000	41,000
Bristol	Ugashik River...	Bristol P. Co...	"	.....	.....	.....	16,000	.....	21,000	.....	.....	.....	.....	16,000	21,000	11,400
Klawack	Klawack	No. P. T. & P. Co.	"	.....	.....	.....	7,221	.....	7,111	4,101	1,824	11,678	23,412	23,000	42,347	36,412
Nushagak	Nushagak River.	Alaska F. P. Co.	Astoria, Ore.....	2,038	.....	.....	39,126	.....	28,750	216	.....	1,751	7,340	43,131	37,090	38,724
Chuitna	Chuitna River..	Alaska S. Assn.	S. Francisco, Cal.	.....	.....	2,637	.....	.....	11,458	.....	.....	.....	7,817	no	22,912	11,480
Ketchikan	Ketchikan	Fidalgo I. P. Co.	Vancouver, B. C.	.....	.....	.....	.....	.....	2,126	.....	280	.....	32,127	no	35,513	49,326
Taku Harbor	Taku Harbor ...	Pacific C. S. Co.	Tacoma, Wn.....	79	.....	798	9,262	1,890	10,529	4,922	4,880	9,890	26,117	26,164	41,324	26,800
Ugashik	Ugashik River...	Red S. C. Co....	S. Francisco, Cal.	.....	.....	367	27,287	.....	27,472	.....	.....	.....	311	27,287	28,150	8,500
Nushagak	Nushagak River.	C. R. S. Assn...	Astoria, Ore.....	.....	.....	.....	29,000	.....	28,776	.....	.....	.....	.....	29,000	28,776	24,284
Tonka	Wrangel Narr's..	P. C. & N. P. Co.		16	47	.....	4,640	1,044	4,850	5,025	3,000	3,184	24,000	13,956	21,850	19,432
Kell Bay	Kuiu Isd.....	Union P. Co....	Tacoma, Wn....	.....	.....	.....	4,112	.....	2,900	2,807	854	21,287	22,500	29,206	27,254	20,939
Lake Bay	Prince of W. Isd.	F. C. B. & Co..	Portland, Ore...	.....	.....	.....	.....	.....	1,400	.....	2,260	.....	10,250	no	13,810	13,849
Metlakahtla	Annette Isd.....	Metlak. Ind. Co.	Metlakahtla, A..	.....	.....	.....	3,700	.....	6,500	2,000	1,300	3,500	9,000	9,200	16,800	23,000
Nushagak	Nushagak River.	A-P. Pkrs. Ass...		2,615	.....	2,968	32,214	.....	26,255	.....	.....	1,923	5,416	36,752	34,638	20,667
Wood Rover	Nushagak River.	Alaska S. Co....	S. Francisco, Cal.	.....	.....	.....	.....	.....	20,000	.....	.....	.....	4,000	no	24,000	17,700
		Thlinket P. & T.														
Funter Bay	Admiralty Isd..	Co.	Portland, Ore...	.....	.....	.....	5,749	.....	5,868	4,553	3,055	16,668	22,985	26,970	31,888	no
Chilkat	Lynn Canal.....	Alaska F. Union.	Seattle, Wn.....	.....	.....	.....	17,681	.....	23,413	5,973	3,066	7,087	2,848	30,741	29,327	no
Kassan Bay	Prince of W. Isd.	Kassan Bay Co..		142	.....	.....	3,179	1,040	3,432	2,385	169	18,216	22,534	23,282	27,135	no
Pt. Ellis	Pillar Bay.....	Pillar B. P. Co..		.....	.....	.....	4,000	.....	6,760	4,000	2,100	4,800	12,200	12,800	20,040	no
Wales Island	Wales Isd.....	Wales I. P. Co..	Seattle, Wn.....	.....	.....	.....	2,961	.....	2,485	634	.....	31,302	15,150	34,817	17,635	no
Shakan Bay	Prince of W. Isd.	A. P. & L. Co...		.....	.....	.....	1,377	.....	2,350	1,146	11,200	9,429	18,393	11,952	32,133	no
Haines Mission	Lynn Canal.....	Columbia C. Co..	Vancouver, B. C.	.....	.....	6,850	9,000	2,500	.....	1,000	1,455	.....	.....	13,500	8,305	no
Total				33,815	1,791	57,867	1,650,271	6,474	1,798,972	112,857	85,035	396,486	675,111	2,203,494	2,545,298	2,076,661

*Fire destroyed this cannery and balance of pack, amounting to over 17,000 cases.
In chum and humpback column of the P. P. & N. Co. there is included 12,295 "do-overs," being the total of all grades.

The First Yearbook

PACIFIC fishing 50 years ago was concerned essentially with salmon. Halibut and codfish trailed far behind in importance; and there were sketchy, local fisheries concerned with oysters and clams and minor market fisheries.

There was no tuna; and *the first YEARBOOK reported on the year's production of sardines, mackerel, shad, crabs and clams in a single sentence.*

"While packing of salmon is the chief canning industry on the Coast, the canning of small fish is coming rapidly to the front. During the past season over 15,000 cases of sardines, 4,500 cases of boiled mackerel, 3,000 cases of shad, 5,500 cases of crabs, and 13,000 cases of clams were packed. Several new plants are contemplated for the coming season."

It's a short paragraph, but it tell a lot about the growth of the Pacific fisheries in 50 years—tells it by indirection to the man familiar with today's great industry.

Those few words show how completely the remarkable rise of the fishing industry in California has come within these 50 years.

No hint of tuna in 1903; and sardines were worth only a sentence—yet in the 50 years these fisheries were to rank with the greatest, and California was to become the greatest fishing state of all.

True, San Francisco was a center of great importance in the fisheries of 1903—but it was stature based on the Alaska salmon and codfish businesses, many of which then were based in the California city.

FIRST article in the first *Yearbook* was "The Salmon of the Pacific," written by Dr. David Starr Jordan, president of Stanford University and an early ichthyologist — an eminent contributor truly, albeit acutely prejudiced, with strong preferences in salmon.

He spoke of Chinooks and Reds as "the noble salmon," and regarded the other species as something less than noble. As a matter of fact, he spoke in the article of Pinks as "imitation salmon," and said Chums "should not be canned at all."

His article began:

"The value of the canned salmon of the Pacific amounts yearly to upwards of 12 million dollars. The two species of salmon chiefly concerned, the Red salmon and the King salmon—*each outranks in economic value all the other 5,000 species of fish of the Pacific taken together.*"

(EDITOR'S NOTE—The italics are ours, emphasizing a statement indicative of the sweeping changes which have come about since the first fishery expert in the United States wrote this for our first Yearbook, 50 years ago.)

EDITOR'S NOTE—The statistical table on this page, and the four other salmon pack tables accompanying this article on "The First Yearbook" are facsimile reproductions of the tables, made by photoengraving from the pages of the Yearbook of 1903.

Central Alaska salmon canning was represented in the 1903 "Yearbook" by this photograph of the Alaska Packers Association cannery at Karluk.

Although the First Yearbook shared the editorial predilection for hatcheries and propagation which in these early days reflected so much of the thinking about salmon and the maintenance of the industry based upon the resource, there were some articles touching the industrial aspects also.

"Trap Fishing" was discussed by Chris H. Buschmann, a widely known operator; and "The First Salmon Cannery" by R. D. Hume, son of one of the founders of salmon canning. "The Old and Modern Ways of Canning Salmon" were discussed by T. E. P. Keegan, superintendent of the Taku Harbor Cannery.

Because of its exceptional interest today, the Keegan article is reproduced hereafter, with some of its illustrations.

PERIODICITY of salmon runs was a matter of great concern in the days of the first *Yearbook*, and no less so today, although perhaps we are a little nearer to the true reasons.

F. M. Chamberlain of the Bureau of Fisheries, wrote in *Yearbook One:* "There is a distinctly marked quadriennial periodicity in the Fraser River Sockeye. The maximum run occurs the year following leap year, and the minimum on the year following that."

(EDITOR'S NOTE—This year, 1953, is the year following leap year. However, Mr. Chamberlain could not know that Sockeye cycles might shift—and actually did so in the '20s, the *second year following leap year becoming the "Big Year."* This condition persisted markedly for 20 years, but now is manifesting some signs of a new reversal. We have learned much about the salmon in 50 years, but much still remains a mystery.)

SUBSCRIPTION price of *Pacific Fisherman* was $2 a year in 1903. It is $3 today, and we honestly believe you get a lot more for your money.

How many products have advanced but 50% in price in those 50 years?

Red salmon was selling at $4.60 per case in 1903—and Pinks were $2.40 per case.

PIONEERS of the Pacific fisheries were still active when *Pacific Fisherman's Yearbook* first appeared in 1903. Salmon canning then was 39 years away from its initiation by William and George W. Hume and Andrew S. Hapgood on the Sacramento in 1864.

When the first *Yearbook* was published in 1903, George W. Hume, who was also the first salmon canner on the Columbia River, was still in the business, a director of the Alaska Packers Association.

First salmon canning on Puget Sound was at Mukilteo in 1877, with George T. Myers heading the firm. He had just retired in 1903 and was living in Seattle as an elder statesman of the industry.

North Pacific Trading & Packing Co. built the first cannery in Alaska at Klawock in 1878, and *Yearbook One* noted that the same company was operating the same cannery at that point in 1903.

THERE were virtually no power boats in the fisheries in 1903—save the halibut steamers and the steam cannery tenders, of course. A few gasoline engines of the heavy duty type were driving tenders then; but scrutiny of the first *Yearbook* yields no reference to an in-internal combustion engine in any fishing vessel.

Since 1903 industrial fishing has grown throughout the Pacific; has risen from the oar-powered purse seiner to the refrigerated tuna clipper.

Fifty years of growth in the Pacific fisheries has been as great as the growth from the sounding lead to the echo sounder, radar and loran.

SALMON traps were a subject of controversy in British Columbia in 1903, and a large part of the first *Yearbook's* review of the situation in British Columbia was devoted to a discussion of this form of gear—which then the Americans had and the Canadians had not.

Just prior to publication of the first *Yearbook*, trap locations had been granted along the southwest foreshore of Vancouver Island, obviously as an offset to the use of traps by Americans working the same runs. Permits to construct the traps had not yet been given, however. That

BRITISH COLUMBIA CASE COUNT, NORTHERN PACK—1903.

Skeena River— CANNERIES.	SOCKEYES. 1-lb. Talls.	½-lb. Talls.	1-lb. Flats.	½-lb. Flats.	1-lb. Ovals.	½-lb. Ovals.	Squats.	Total.	SPRINGS. Total.	HUMP-BACKS. Total.	COHOES. Total.	Grand Total.
Balmoral	1,540	.....	.....	3,744	.....	.....	.....	5,284	3,596	.....	1,994	10,874
Cunninghams	3,313	.....	.....	.....	.....	.....	.....	3,313	2,894	236	2,015	8,459
Standard	1,332	.....	.....	1,784	.....	.....	.....	3,116	.....	88	306	3,510
B. A. & N. Pac	1,940	.....	748	5,928	4,857	.....	.....	13,473	3,339	1,956	1,878	20,646
Inverness	3,127	.....	.....	2,134	.....	.....	.....	5,261	813	3,163	850	9,887
Oceanic	1,739	.....	.....	4,188	350	.....	.....	6,277	1,691	4,583	1,390	13,941
Carlisle	3,286	.....	893	.....	.....	.....	.....	4,179	798	1,164	343	6,483
Claxton	1,174	.....	2,225	2,583	.....	.....	.....	5,982	1,546	3,798	1,141	12,472
Hermans	2,611	.....	.....	.....	.....	.....	.....	2,611	3,508	3,366	650	9,135
Cassiar	1,531	.....	.....	.....	.....	.....	.....	1,531	.....	1,024	936	3,491
River Inlet—												
Brunswick	15,056	2,340	.....	.....	.....	.....	.....	16,396	282	25	.....	16,704
Wadhams	10,446	.....	7,031	3,092	.....	.....	.....	20,569	314	92	.....	20,975
Good Hope	12,268	.....	.....	.....	.....	.....	.....	12,268	.....	63	185	12,516
Rivers Inlet & Victor	16,895	.....	.....	.....	.....	.....	.....	16,895	272	.....	24	17,192
Naas River—												
Mill Bay	3,916	.....	.....	.....	.....	.....	.....	6,916	1,049	.....	1,008	5,973
Naas Harbor	93	.....	3,448	.....	982	.....	.....	4,522	426	.....	1,179	6,127
Scattering—												
Love Inlet	6,919	.....	.....	.....	.....	.....	.....	6,919	77	.....	3,200	10,196
Kimsquit	5,378	.....	.....	.....	.....	.....	.....	5,378	417	.....	1,010	6,805
Namu	2,819	.....	.....	.....	.....	.....	.....	2,819	.....	826	1,508	5,162
Bella Coola	4,088	.....	.....	.....	.....	.....	.....	4,088	1,222	.....	4,430	9,741
Hickey Co.	5,300	.....	.....	.....	.....	.....	.....	5,300	650	.....	.....	5,950
Alert Bay	1,585	.....	.....	.....	.....	.....	.....	1,585	.....	1,518	219	3,542
Clayoquot	3,950	.....	.....	.....	.....	.....	.....	3,950	513	.....	497	4,960
Alberni P. Co	2,390	.....	.....	.....	.....	.....	.....	2,390	125	.....	353	2,868
Pac. Northern	2,932	.....	.....	.....	.....	.....	.....	2,932	182	.....	2,940	5,994
	116,527	2,340	14,345	23,448	6,192	.....	.....	162,880	23,449	21,331	27,845	236,351

was to follow, and the traps are there today—long after traps have been banned from all waters of the State of Washington.

FIRST *Yearbook* of 1903 contains a reference to the Quesnel Dam, which then was destroying the run of salmon to that great tributary of the Fraser, a lake system which has been barren until in very recent years the International Pacific Salmon Fisheries Commission has had some success in re-establishing the Quesnel race of Sockeye. In 1952 there were 7,000 spawners in the Horsefly tributary of the Quesnel, where in 1948 there were but 50—and none in 1944.

Writing about this destruction of the Quesnel Sockeyes by a dam, Geo. S. B. Perry wrote in our first *Yearbook:*

"The most serious matter in connection with the propagation of fish on the Fraser River for some years past has been the building of a dam at the mouth of Quesnel Lake by the Golden River Quesnel Co., without any adequate provision for access of fish, which in previous years had gone up there by millions to spawn.

"The dam has closed the most important spawning ground in British Columbia."

The forces which build dams were powerful then, as now, and efforts to force removal of the dam were unavailing for many years, and not until the richest single run of the Fraser Sockeye had been destroyed utterly.

The latent possibilities of the Quesnel System today are as rich as they were before the dam was built, and men are finding ways of aiding Nature to undo the damage done by the dam builders of more than 50 years ago.

A new run to the Quesnel is one of the richest latent possibilities in Canada's unfolding future.

TWENTY firms which advertised in the *Pacific Fisherman* Yearbook for 1903 continue as our customers today, after 50 years of a relationship at once profitable and cordial.

In the first *Yearbook* advertisers we find:

American Can Co.

J. K. Armsby Co., parent of California Packing Corporation.

Union Fishermen's Cooperative Packing Co.

Fairbanks, Morse & Co.

Pacific Net & Twine Co., now Pacific Marine Supply Co.

Portland Cordage Co., now Tubbs Cordage Co.

Columbia River Packers Association

Sunde & Erland, now Sunde & d'Evers Co.

Union Gas Engine Co., now Union Diesel Engine Co.

Astoria Iron Works, now Continental Can Co.

Smith Cannery Machines Co.

Kelley-Clarke Co.

San Juan Fishing & Packing Co.

The Linen Thread Co.

Plymoth Cordage Co.

P. F. Nordby, Inc., now Nordby Supply Co.

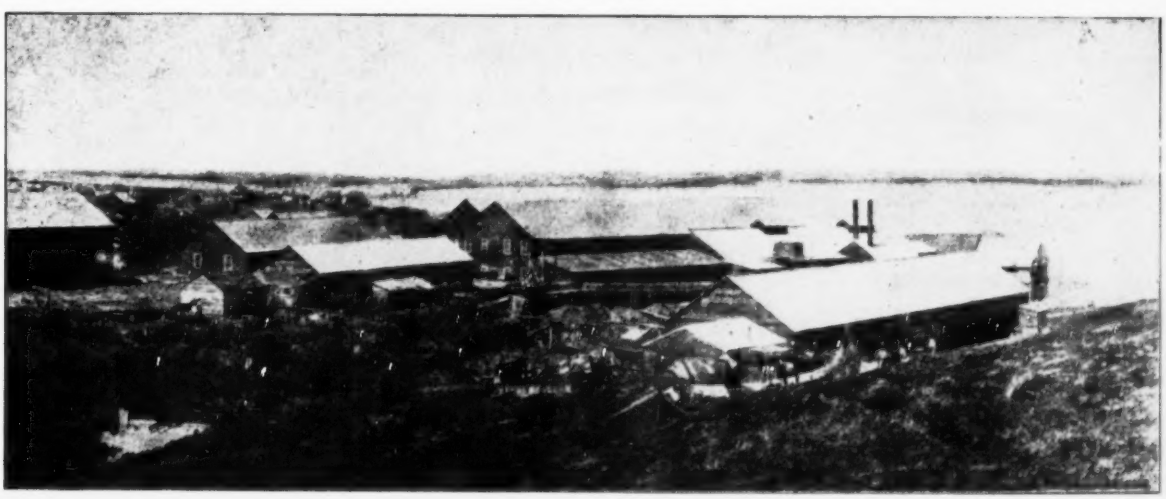
Washington Iron Works

Max Kuner Co.

Griffith-Durney Co.

The Fred H. Knapp Co., now Standard-Knapp.

A Bristol Bay salmon cannery—not identified—pictured in the first edition of the "Pacific Fisherman Yearbook," 1903.



CANNED and FROZEN

Seafood Sales in CHICAGO

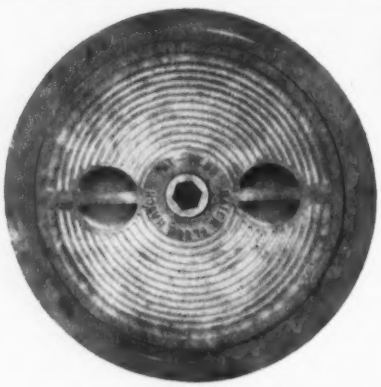
are the specialty of the FROHMAN ORGANIZATION. We offer complete trade coverage, a 44 year background of marketing and sales promotion experience in the CHICAGO market, and nationally recognized high standards of service to cooperative and aggressive packers.

Our business is the establishment of repeat volume sales of Canned and Frozen Fish and Seafoods. We are builders of brands. We are prepared to consult with any non-conflicting account to plan a progressive sales program.

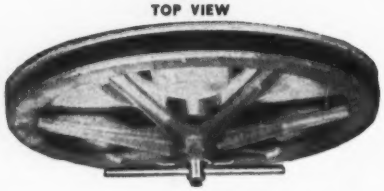
L. H. FROHMAN & SONS Sales Agents

FOR CANNERS AND PACKERS OF FOODS

510 NORTH DEARBORN STREET CHICAGO 10 TELEPHONE SUPERIOR 7-8375



TOP VIEW



BOTTOM VIEW

Manufactured from

CORROSION RESISTING BRONZE or ALUMINUM*

STOCK SIZES

20", 18", 14" and 8" ROUND

13½" x 20½" OVAL

*STEEL DECK RINGS FOR STEEL BOATS

BAIER FLUSH HATCH

Boat Owners Say—

IS THE BEST "SCUTTLE" THEY HAVE EVER USED

HUNDREDS have been installed on fishing boats, work boats, tugs, ferries, passenger ships, etc.

FEATURES patented watertight design. Fastest to open and close, can be opened from above or below — Safety First.

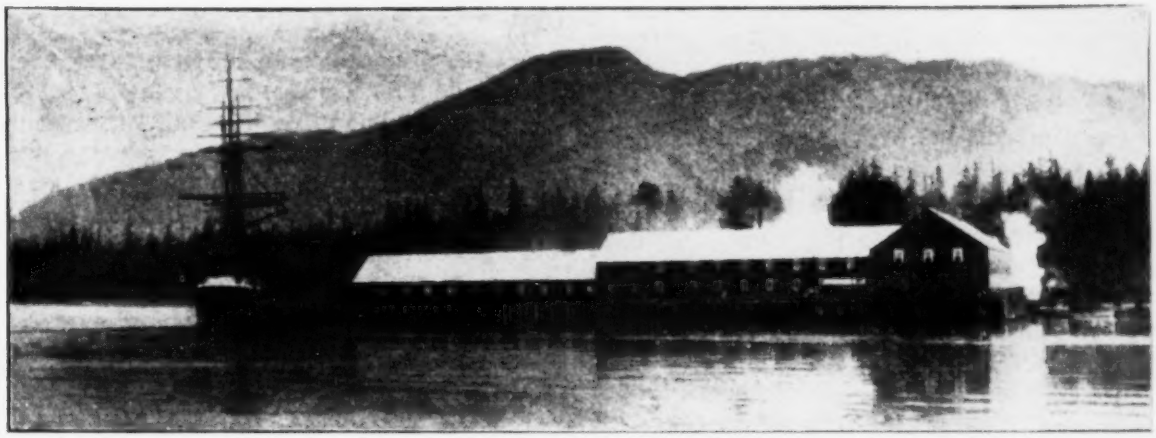
APPROVED U.S.C.G., A.B.S., Corps of Engineers, U.S.A. Specified by leading naval architects for boats all over the world.

IF YOUR LOCAL DEALER CANNOT SUPPLY YOU WRITE, WIRE OR PHONE

L. S. BAIER & ASSOCIATES
MARINE DESIGNERS & ENGINEERS
Suite 544 Mead Bldg., Portland 4, Oregon

MARINE PRODUCTS & ENGINEERING CO.
150 Nassau St., New York 38, N. Y.

J. S. DAVIDSON — Canadian Representative
400 Ford Building, Vancouver, B. C.



A Southeast Alaska salmon cannery pictured in "Pacific Fisherman Yearbook" for 1903. It is believed to be the Alaska Packers Association plant at Pyramid Harbor on Lynn Canal.

ADVERTISING objectives, as well as the products and services advertised, offer interesting evidence of the march of the fishing industry in 50 years, when the advertising pages of our first *Yearbook* of 1903 are examined in parallel with those of today.

Study of the advertising pages of the *Yearbook* of 1903 shows the advertisements falling into six categories:

Packers, Brokers and Distributors; Can-Making Machinery; Fish-Packing Machines; Engines and Pumps; Metals; Miscellaneous Supplies.

Study of the advertisements reveals some interesting facts as to the objectives sought, as well as to the products offered.

Examination of the six categories listed above discloses:

Packers, Brokers and Distributors—Then as now, these men and firms with fish to sell found in the *Pacific Fisherman Yearbook* a valuable means of maintaining year-round contact with those through whom the products of the fisheries reach the ultimate consumer. *Then* it was the field broker and the wholesale grocer. Now these still serve, and to them are added the tremendously important buyers for the great chains, the voluntaries, the supers, and all the facets of modern merchandising which have come into being with the automobile and the cash-and-carry system of food buying.

Can-Making Machinery—This was highly important to the canner of 50 years ago; and to the *Yearbook* also, for such machinery was an important source of advertising then, when every cannery made its own cans after the process described by Mr. Keegan in the article on "modern" (1903) salmon canning reproduced in this issue. Among the principal can-making machines advertised in the first *Yearbook* were those which rolled the lower edge of the inclined can through a bath of molten solder to attach the can bottom to the body. Solder-saving was a big item, and manufacturers of machines and auxiliary devices stressed this point. Fuel for the soldering machines was also important, with little choice save wood or coal—although soldering coppers for hand work were usually heated in a pressure-burner flame from kerosene.

Fish dressing machinery was in its barest beginnings in 1903, but the first *Yearbook* contained the advertisements of three such machines—the Iron Chink, which was to emerge as the winner in one of the most interesting competitions in industrial mechanization that the Pacific has known; the Kellington fish-cleaning machine, manufactured by Schaake Machine Works; and the Canners Machine Co. fish cleaner, whose advertisement boasted that 23 were already in use.

Engines had a prominent place in the advertisements of the initial *Yearbook*, but they were all gas or steam engines—no hint or whisper of the diesel then.

The number of label advertisements was astonishing, but the manufacturers comparatively small and widely distributed.

As might be expected in an industry which was still making many of its own supplies, metals—particularly those which go into solder—were a primary element in the products advertised.

PUGET SOUND PACK—1901-1902-1903.

NAME	Location.	Head Office.	SOCKEYE			COHOE			HUMPBACK AND CHUM			TOTAL		
			1903	1902	1901	1903	1902	1901	1903	1902	1901	1902	1902	1901
Pac. Pk. & Nav. Co...	Blaine	Seattle, Wn.....												
"	Friday Harbor..	"	49,228	129,500	278,318	8,228	31,000	62,968	56,136	27,500	35,945	113,842	188,000	477,232
"	Fairhaven	"												
Alaska Pkrs. Assn....	Blaine	San Francisco...												
"	Point Roberts...	"	29,227	80,348	307,119	679	3,369	6,339	37,315	384	1,449	67,121	84,101	314,905
"	Anacortes	" ...												
No. American Fisheries	Anacortes	Seattle, Wn.....	13,316	21,409	44,500	25,876	6,021	4,700	8,129	4,791	7,000	46,321	32,221	56,200
Apex Packing Co.....	Anacortes	Anacortes, Wn.....	995	2,144	.....	5,794	2,449	.....	12,264	14,051	.....	20,053	20,644	.....
Astoria & P. S. Pk. Co	Chuckanut	Astoria, Ore.....	5,465	8,021	21,354	13,823	7,225	11,368	5,762	2,613	2,988	25,050	17,879	35,690
Allen, Henry F.....	Blaine	San Francisco.....	4,000	7,144	7,100	5,800	3,489	.....	6,100	384	.....	15,900	10,997	7,100
Carlisle Pack Co.....	Lummi Isd.....	Whatcom, Wn.....	4,800	4,560	48,345	650	2,400	172	9,500	5,305	1,908	14,950	12,265	50,425
Cook Pk. Co. J. W. & V..	Blaine	Portland, Ore.....	7,793	11,547	32,462	5,195	1,711	5,015	4,023	348	1,481	17,619	13,606	38,958
Fidalgo Isd. Pk. Co...	Anacortes	Vancouver, B. C.....	20,784	29,827	76,290	7,910	5,627	8,862	28,344	6,325	10,231	53,333	41,789	95,474
George and Barker Co..	Point Roberts...	Pt. Roberts, Wn.....	14,950	14,500	34,500	896	2,400	.....	9,330	1,200	.....	25,080	18,400	34,500
Manhattan Pkg. Co....	Port Angeles....	Pt. Angeles, Wn.....	7,901	3,166	.....	1,811	8,801	.....	450	936	.....	10,162	12,903	.....
Rosario Sts. Pk. Co....	Anacortes	Anacortes, Wn.....	1,041	7,500	13,950	5,930	8,500	4,000	6,623	2,000	4,000	13,594	18,000	26,000
Sehome Canning Co....	Fairhaven	Fairhaven, Wn.....	943	2,905	.....	2,529	5,691	.....	5,267	3,725	.....	9,139	11,321	.....
United Fish & Pk. Co..	Fairhaven	Seattle, Wn.....	2,782	6,000	7,200	14,915	1,900	4,400	950	50	7,000	19,647	7,950	18,600
"	Seattle	"	.....	9,400	.....	.....	6,500	.....	.....	14,740	.....	.....	30,640	.....
White Crest Can'g Co..	Anacortes	Anacortes, Wn.....	3,329	295	15,343	7,540	1,610	2,598	6,669	12,000	3,157	17,638	13,905	21,298
Canneries not operated 1903 or 1902.....			.....	.....	144,590	.....	.....	40,858	.....	.....	50,122	.....	.....	235,481
Total			167,841	339,556	1,137,422	107,883	99,713	153,281	197,851	96,322	167,881	472,104	534,591	1,416,165

Note—King or chinooks counted as sockeyes. All figures based upon a unit of 48 one-pound cans to the case.
The Fairhaven cannery of the United Fish & Pack Co. was known as the Washington Packing Company in 1902 and the Seaberg cannery in 1901.
Where we could not get a direct answer from the cannery companies as to their figures we have used the estimates of Kelly-Clarke Co.

Dependable ...AS THE TIDES

SUNDE & d'EVERS QUALITY

DISTRIBUTORS FOR

- SMITH Marine Paints and Varnishes
- HAZARD, ROEBLING Trolling Strand
- WILCOX-CRITTENDEN Marine Hardware
- BIBB Porterdale Seine Twine
- CANADIAN WONDER Trolling Spoons
- TUBBS Cordage and Ropes
- BOSTON & LOCKPORT Blocks
- EDERER'S Netting
- EXIDE Batteries
- MUSTAD Hooks
- BALTIMORE Copper Paints
- COLUMBIAN Propellers
- CROSBY Wire Rope Clips
- WICKS, MITTET Halibut Lines
- GODFREY Corrosion Collars
- SUDBURY AQUA-CLEAR Feeders

MANUFACTURERS

- TARPS, SAILS
- TENTS, AWNINGS
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- *"Anything Made of Canvas"*

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- LAUSON Outboard and Inboard Motors
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MARINE SUPPLIES
SUNDE & d'EVERS CO.
COLMAN FERRY TERMINAL (ESTAB. 1892) SEATTLE WASHINGTON

What the well-dressed fisherman wore on the Columbia River in the '80s is shown on this label, which antedates 1887, the year in which Fishermen's Packing Co. became a part of "The Combine," as the Columbia River Packers Association then was called.

RED salmon were market-dominant in 1903, as is plainly evident from the "Market Reports" division of *Pacific Fisherman's* first *Yearbook*.

In its market comment printed in that volume, the Kelley-Clarke Co. wrote:

"The most salient feature of the situation is the largely increased consumption of the Pink grade, which has been brought about entirely through the fact that certain Red salmon interests have insisted upon sacrificing the price of Pink salmon below cost; as well as sacrificing, and we might say almost crucifying, those unfortunate independent packers who have had to depend largely on this grade for their pack, many of whom have gone to the wall during the last season, and others have shut down, thus materially reducing the pack of Pink salmon in Alaska, this year's pack being about half of that of 1902."

That's a long sentence—103 words—but it voiced long thoughts.

The "American Grocer" was quoted as saying:

"Present low prices are the result of a trade war, and not due to any relation between supply and demand. It is a confession that Red salmon interests have been hurt by the increasing consumption of low-grade salmon. A boomerang was hurled when 37½c and 50c was made the fob. price for cheap fish." (Quotes were for Chums and Pinks, respectively, per dozen talls.)

Leading factors' price for Red salmon at that time was $1.30 per dozen, with independent factors reported offering at $1.20, and even at $1.13. Kelley-Clarke blurted out: "Red salmon is not worth over $1.15, and we do not believe any higher price is warranted."

The 50c per dozen price of Pinks—$2 per case—was reported by one authority to be 60c per case under cost.

This cost figure varies quite a bit from that set-out in a detailed break-down on the estimated average cost per case for a pack of 40,000 cases of Alaska salmon, as follows:

Cans	.65
Box	.11
Labels	.05
Laquer	.0126
Chinese labor	.42
White labor	.10
Freight	.30
Fuel	.001
Transportation	.03
Board of men	.05
Cost without fish	$1.732

Cost of fish was estimated as follows: Pinks, 2c each, per case, 40c; Chums, 2c each, per case, 20c; Cohoes, 10c each, per case, $1; Reds, 10c each, per case, $1.10; Chinooks, 50c each, per case, $1.50.

This gives an estimated average cost per case of: Pinks, $2.13; Chums, $1.93; Cohoes, $2.73; Reds, $2.83; Chinooks, $3.23.

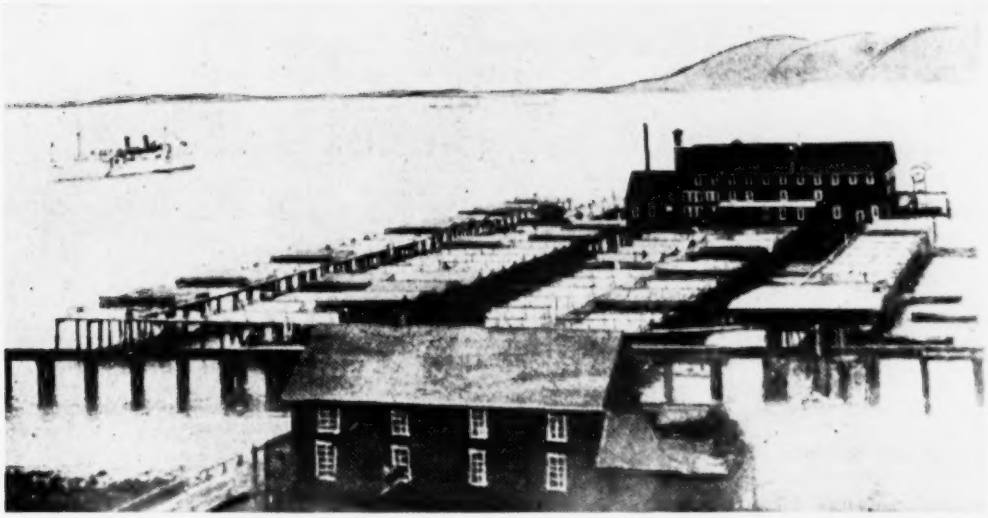
MILD curing was a business in 1903, just at the take-off of a spectacular rise from its beginnings, but it was still confined largely to the Columbia River, where the review in *Yearbook No. 1* says it had its beginnings in 1898, although nine years before there was an

BRITISH COLUMBIA CASE COUNT, FRASER RIVER PACK—1903.

CANNERIES.	SOCKEYES. 1-lb. Talls.	½-lb. Talls.	1-lb. Flats.	½-lb. Flats.	1-lb. Ovals.	½-lb. Ovals.	Squats.	Total.	HUMP-BACKS. SPRINGS. Total.	HUMP-BACKS. Total.	COHOES. Total.	Grand Total.
Albion	.....	.....	1,930	4,758	.....	.....	.....	6,688	.....	.....	.....	6,688
Atlas	.....	.....	1,372	3,430	.....	.....	.....	3,702	3	.....	.....	3,705
Anglo-American	164	.....	.....	.....	.....	2,986	.....	3,150	324	.....	.....	3,474
Acme	.....	.....	2,503	1,266	.....	.....	.....	3,769	.....	.....	.....	3,769
Brittania	.....	.....	4,388	.....	.....	3,142	.....	7,530	.....	.....	.....	7,530
Brunswick	509	.....	2,278	3,426	.....	.....	.....	6,212	.....	.....	9,533	15,745
Beaver	4,220	.....	750	1,990	.....	.....	.....	6,960	380	.....	4,000	11,340
B. A. & C. Pass	914	.....	.....	.....	.....	4,758	1,133	6,805	72	.....	2,373	9,250
B. C. Packing Co.	2,732	.....	.....	.....	.....	2,302	.....	5,034	200	.....	.....	5,234
Canadian Pacific	.....	.....	.....	4,454	.....	.....	.....	4,454	7	.....	.....	4,461
Curries	4,218	.....	.....	4,563	.....	.....	.....	8,781	131	.....	.....	8,912
Colonial	448	.....	.....	.....	352	2,640	.....	3,440	.....	.....	.....	3,440
Celtic	.....	.....	1,158	2,393	.....	.....	.....	3,551	.....	.....	.....	3,551
Cleeve	.....	.....	.....	2,364	.....	.....	2,361	4,725	.....	.....	13	4,738
Deas Island	.....	.....	1,193	5,694	.....	.....	.....	6,887	238	.....	1,377	8,502
Dinsmore Island	2,135	.....	.....	1,450	.....	.....	.....	3,585	43	.....	1,677	5,305
Ewens	.....	.....	3,569	4,043	.....	.....	.....	7,612	225	.....	103	7,940
English Bay	.....	.....	.....	3,183	.....	.....	.....	3,193	14	.....	.....	3,197
Eagle Harbor	691	.....	736	3,072	.....	.....	.....	3,489	55	2,607	716	6,867
Federation	498	.....	.....	.....	4,028	.....	.....	4,526	.....	.....	.....	4,526
Fraser River	.....	.....	2,979	2,007	.....	.....	.....	4,986	45	.....	.....	5,031
Gulf of Georgia	10,631	.....	.....	.....	.....	1,065	.....	11,696	.....	.....	150	11,846
Great Northern	.....	.....	.....	2,228	.....	.....	.....	2,288	21	.....	.....	2,309
Industrial	.....	.....	.....	3,192	.....	.....	.....	3,192	.....	1,087	461	4,740
Imperial	11,785	.....	.....	3,777	.....	.....	.....	15,562	90	.....	195	15,847
Phoenix	3,830	.....	.....	3,017	.....	.....	.....	6,847	.....	.....	.....	6,847
Pacific Coast	.....	.....	1,989	3,495	.....	.....	.....	5,484	.....	.....	.....	5,484
Piedmont	3,490	.....	.....	1,005	.....	.....	.....	4,495	.....	.....	.....	4,495
Scottish-Canadian	.....	.....	1,746	6,609	.....	.....	2,108	10,463	.....	.....	.....	10,463
St. Mungo	1,371	.....	1,347	2,125	.....	1,195	.....	6,038	.....	810	4,327	11,175
Star	4,359	.....	.....	3,131	.....	.....	.....	7,490	191	.....	200	7,881
Terra Nova	.....	.....	4,749	2,967	.....	.....	.....	7,716	.....	.....	.....	7,716
Vancouver	.....	.....	.....	4,572	.....	.....	.....	4,572	45	.....	.....	4,617
Wadhams	.....	.....	1,871	3,575	.....	.....	.....	5,396	.....	.....	.....	5,396
Westminster	.....	.....	2,759	2,582	.....	.....	.....	5,341	.....	.....	.....	5,341
Totals—												
Fraser River	51,704	.....	37,157	88,418	4,380	17,588	5,602	204,849	2,084	4,504	26,725	237,162
Northern	116,537	3,340	14,345	23,448	6,192	.....	.....	163,860	23,449	21,231	27,845	236,385
	168,241	3,340	51,502	111,864	10,572	17,588	5,602	368,709	25,533	25,735	53,570	473,547

UNION FISHERMEN'S CO-OPERATIVE PACKING COMPANY

ASTORIA, OREGON



Union Fishermen's Cooperative Packing Co. cannery at Astoria, Ore., looked this way in 1903. All of the buildings in this picture are still in use to the present—although the plant of course has been greatly enlarged. The large building in the background to this day is the central structure of the salmon cannery; while the building in the foreground is the smokery. Cold storage, tuna cannery, oyster cannery and fresh fish dock and plant, beside necessary warehouses have been added to the plant over the intervening 50 years.

abortive operation promoted by a glib German who arranged for a pack but neglected to pay for it when it reached Germany.

The first pack made elsewhere than on the Columbia was in 1900 on the Sacramento; and in 1901, the first *Yearbook* reported: "The Sacramento River Packers Association put up 100 tons of spring salmon at Monterey that were caught with hook and line in the open ocean."

Here was the beginning of commercial trolling.

FREEZING of fish on the Pacific in 1903 was still largely confined to Steelheads destined for Europe—at least this pack was the only one reported upon in the first *Yearbook*, which said that in 1903 there were 650 tons of Steelheads frozen on the Columbia for France and Germany—with the Columbia River Packers Association the leading factor in the business.

In 1903 salt codfish ranked third among the Pacific fisheries, behind salmon and halibut. The landings in that year were reported as 2,142,000 fish at San Francisco; plus about 400 tons, salted weight, on Puget Sound. Although some Pacific salt codfish was being shipped east for blending with products of the Atlantic fishery on account of the more pronounced flavor of the Pacific product, substantial quantities were also shipped West by Atlantic operators to satisfy a Pacific demand for certain famous East Coast brands.

Despite its importance, the halibut fishery received scant attention in our initial *Yearbook*, which gave it half a page of space, but devoted all of it to a discussion of the new steamers which had entered the fishery during the year. Latest, and most heavily featured, was an addition to the New England Fish Co. fleet known as the *Columbia*, remodeled from the passenger steamer *Saga*.

EDITORIAL analysis of the first *Yearbook of Pacific Fisherman* reveals two primary peculiarities of emphasis—on hatcheries and on shellfish. Here the editorial selection followed the interest of the times—as it always should—and permitted a disproportionate part of the editorial contents to be devoted to artificial propogation and the shellfish resources.

Oysters were first among shellfish in 1903, and received nearly half the space accorded to all shellfish. It is notable also that mussels and periwinkles were deemed worthy of discussion, and crawfish came in for as much space as crabs. Estimate of the Washington state crab fishery for 1903 placed its value at $52,500; with the business centered almost exclusively in Puget Sound — at Dungeness and Blaine.

Native oysters of course were the backbone of the oyster business, but Eastern transplants were also important, particularly on Willapa Harbor—then Shoalwater Bay, of course.

However, importation of seed from Japan had been begun even before *Pacific Fisherman*, and in the first *Yearbook* we find this reference:

"The success attending the transplanting of the Eastern oyster has suggested the possibility of introducing other species into our waters. Attention has turned particularly to Japan, where there are several species of oysters, three at least, which are of commercial importance.

COLUMBIA RIVER PACKS.

COMPANY	HEAD OFFICE	CANNERY LOCATION	CHINOOKS		SILVERSIDES		STEELHEADS, Etc.		TOTAL		"SHAD"	CLAMS
			1903	1902	1903	1902	1903	1902	1903	1902	1903	1902
Columbia Packers Ass'n	Astoria, Ore.	Astoria (2)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbia Packers Ass'n	Astoria, Ore.	Eureka	105,090	120,523	.....	2,912	.....	8,102	105,090	131,537	.....	.....
Columbia Packers Ass'n	Astoria, Ore.	Warrior Rock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union Fishermens Co-Op. Co.	Astoria, Ore.	Astoria	24,000	28,291	.....	.....	.....	.....	24,000	28,291	.....	.....
Tallant-Grant Co.	Astoria, Ore.	"	14,000	.....	.....	.....	.....	.....	14,000	.....	.....	.....
Sanborn-Cutting Co.	Astoria, Ore.	"	27,000	37,772	.....	.....	.....	.....	27,000	37,772	3,000	.....
A. Booth & Co.	Astoria, Ore.	"	24,900	.....	.....	.....	.....	.....	24,900	.....	.....	.....
J. G. Megler	Brookfield, Wn.	Brookfield, Wn.	14,750	23,500	.....	.....	.....	.....	14,750	23,500	.....	.....
P. J. McGowan & Sons	McGowan, Wn.	McGowan	17,000	16,950	.....	4,968	250	1,200	17,250	23,118	.....	.....
P. J. McGowan & Sons	McGowan, Wn.	Ilwaco, Wn.	7,800	.....	2,700	.....	.....	.....	10,500	.....	.....	.....
P. J. McGowan & Sons	McGowan, Wn.	Warrendale	8,000	15,000	1,300	.....	750	.....	10,050	15,000	.....	.....
Pillar Rock Pack. Co.	Portland, Ore.	Pillar Rock, Wn.	17,000	26,523	875	.....	.....	.....	17,875	26,523	.....	.....
Warren Pack. Co.	Portland, Ore.	Warrendale	13,000	24,335	.....	.....	6,100	.....	19,100	24,335	.....	.....
Warren Pa k. Co.	Portland, Ore.	Cathlamet	13,000	23,600	.....	.....	1,455	.....	14,455	23,600	.....	.....
Seufert Bros.	The Dalles, Ore.	The Dalles, Ore.	13,998	16,463	1,500	.....	1,700	.....	23,198	16,463	.....	.....
B. A. Seaborg	Eagle Cliff, Wn.	Eagle Cliff	6,000	.....	5,000	.....	.....	.....	11,000	.....	.....	.....
Sea Beach Packing Wks.	Markham, Wn.	Markham	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,000
Total			311,350	330,956	11,375	7,880	10,255	9,302	332,980	348,139	3,000	3,000

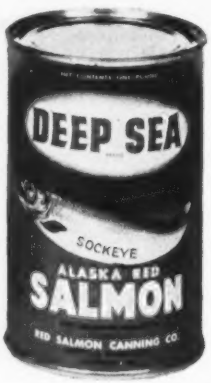
Canning and Selling Salmon for Over Sixty Years

Red Salmon Co.

NAKNEK, BRISTOL BAY, ALASKA

Packing

RED ALASKA SOCKEYE, ALASKA KING and ALASKA CHUM SALMON

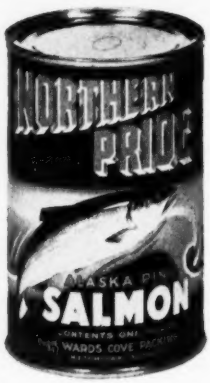


Wards Cove Packing Co.
Beegle Packing Co.

KETCHIKAN, ALASKA

Packing

RED ALASKA SOCKEYE, ALASKA COHO, PINK and CHUM SALMON



Frank B. Peterson Co.

SEATTLE, WASHINGTON

SELLING

"DEEP SEA" BRAND—Alaska Red Salmon, Fancy Albacore Tuna, Minced Razor Clams and Dungeness Crabmeat.

"ROYAL CLUB" BRAND—Alaska Pink Salmon.

"JACK FROST" BRAND—Alaska Red Salmon and Albacore Tuna Flakes.

"PIRATE" BRAND—Alaska Chum Salmon and Grated Albacore Tuna.

GENERAL OFFICES:
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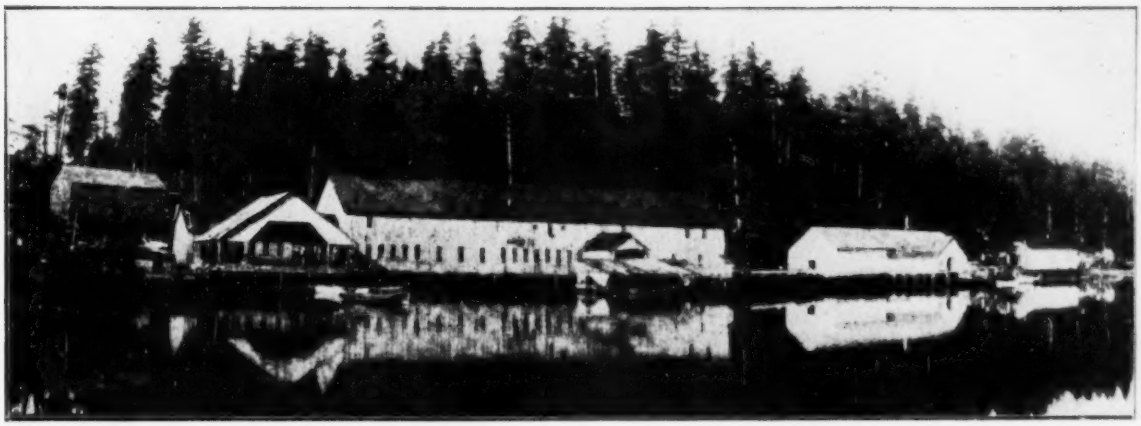


Klawack cannery of the North Pacific Trading and Packing Co., built on the site of the first salmon cannery in the territory. This is the plant in 1903 as it had developed in the 25 years from its establishment in 1878. Some portions yet remain.

The Old and The Modern Ways of Canning Salmon

By T. E. P. KEEGAN

Superintendent, Taku Harbor Cannery

This article, written 50 years ago for the first Yearbook, is of particular interest in that it is devoted to contrasting "modern" salmon canning of 1903 with the "old ways," going back to the barest beginnings of salmon canning 40 years earlier.

SINCE the commencement of the salmon canning industry on this coast 40 years ago, ingenuity has been the main factor in the development of the now leading industry of the Pacific Coast.

Those that are in the lumbering and coal trade may not agree with me when I make the claim as to the canning business being the leading business of the Coast, and they may claim that the salmon canning industry is only of minor importance compared to their different branches of trade.

In reflecting over the matter, and taking into consideration the amount of lumber in its various forms that is being used each season, and the thousands of tons of coal that is consumed annually in the development of the canning industry, tends to prove that it is the source of a large revenue to the other industries of the Coast.

Returning to our subject and glancing back through the space of time to 40 years ago, we find that the methods of canning in those days were very crude compared with the modern ways of today.

Large Advance in '70s

However, the hands of ingenuity did not make any material advancement in the line of improvements until the latter part of the Seventies. About that time the soldering machine and retorts came into use, and gradually other machines were invented and installed in the cannery plants, so that in these present days of canning, one man, with the aid of machinery, does as much work in one day as it required six men to do in the old, crude way. Prior to the installation of the machinery in the canneries, the hands were employed by the day, and the different plants employed, according to their size, from 100 to 350 employees.

I will now devote a little space to explaining the different work required to prepare the canned article for the market without the aid of machinery, by first commencing with the labor of making cans.

Can-Making by Hand

The tin plate being squared in the square shears, was then cut into proper sized pieces for can bodies, and eight of these pieces in a bunch were passed through the can-forming machine (consisting of three steel rollers) and rolled into shape. Eight of these rolls were taken at a time by each Chinaman working at the seamer bench, and by him one tin at a time was placed on the seamer cylinder (each Chinaman having a set of two such cylinders at his bench) in a way so that the two edges of the tin would come tightly together, and

1928—1953

Fishermen's Packing Corporation

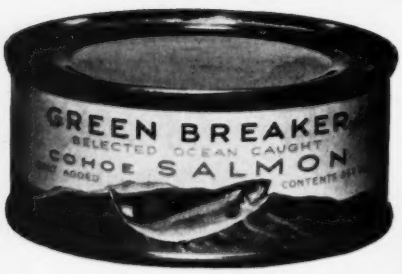
CANNERS OF PUGET SOUND SALMON

SOCKEYE
Snow Cap
Snowland

COHOE
Olympic
Green Breaker

PINK
Waterfall
Ocean Spray

CHUM
Golden West
Golden Glow



OUR *25th* Anniversary

FISHERMEN'S PACKING CORP.

OFFICE AND CANNERY
ANACORTES, WASHINGTON

be held under the edge of a thick piece of slate, held in a frame over the cylinder, and raised off of the cylinder by a spring.

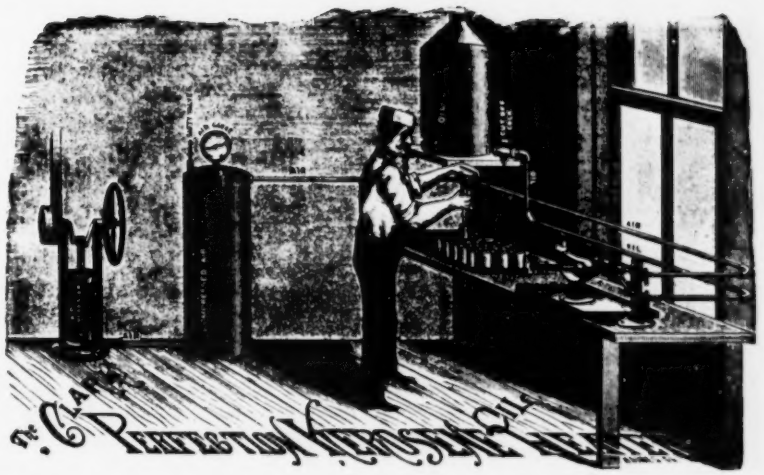
A cut drop of solder and a particle of resin being placed on the seam next to the slate was evenly distributed over the seam by a hot seaming copper made for that purpose. (A number of the canneries of the present day still seam cans as above described.) The can was then seamed on the inside by a man or boy having a pointed copper, and from him it went to the bottom table. The bottom edge of the tin being dipped into a dish or vessel containing a piece of old netting or waste saturated with acid, then the bottom was placed on it, and a cut drop of solder dropped into the can; then it was ready for the "floater," as the man was termed whose work it was to solder on the bottoms. The floating was done by inserting a specially-made copper into the can. The copper was flared at the end so that it was semi-circular at its edge, and it enabled the "floater" to perform his work very quickly. As soon as the cans were made they were taken to the reamer to have the top edge reamed out (the purpose of which will be explained later on in the process of canning) and then were piled up ready for use.

A number of the Columbia River canneries in those days would commence can making during the month of December, so as to have the work completed by the first of April. Others would commence work early in the spring, and keep the tin shop crew at work during the entire season.

Preparation of the Fish

Upon the opening of the fishing season, the following routine of work was necessary to prepare the fish for canning and to place the same upon the market.

The fish having been landed on the wharf, they passed through the hands of the butchers to the slimmers (in the same way that is in vogue in a number of the canneries at the present day), and from them to the gang knives operated by hand, to be cut into pieces or lengths to correspond with the height of the can. It was then passed onto a table and chopped into smaller pieces lengthwise by one or more Chinamen using extra large butcher knives. From the choppers it was carried in boxes to the filling tables to be filled into the cans. The cans were then carried in trays to a long table where the top edge was wiped by hand with a cloth; they were then passed on by sliding on the table to another crew of men whose work was to top the can by placing the top inside of the reamed edge and then place the cans upright in trays holding twenty-four cans each. The trays were then carried to the soldering men working at benches, and they would then proceed with a square-end copper in one hand and a bar of solder in the other, to distribute the solder evenly around the inside of the reamed edge, as it was melted by the hot copper, and with a few dexterous movements of the copper to smoothen the solder and give it a neat, smooth appearance. He would then proceed to the next can and continue until all the cans in the tray were soldered. As soon as a tray of cans were soldered, the number of the soldering man was marked on the top of the can with a piece of red slate or chalk by a man or boy. He would then inspect the soldering with a scratch awl to detect any leaks or holes that might be in the solder. The leaky cans found were returned to the soldering man to be mended, and as soon as a tray of cans were passed, the vent holes in the top were stopped by a man having a stopping copper for that purpose.



A snappy advertising illustration from the "Yearbook" of 1903, showing some of the equipment needed in the salmon plant's can-making department.

Testing and Exhausting

The cans were then placed in coolers and wheeled into the bathroom and there tested for more leaks and defects in the cans, by placing the coolers in a square kettle of warm water (into which a quantity of salt had been dissolved), and by an expert the leaks can be picked out readily. The leaky cans from the test kettle were returned to the solderer (whose number corresponded with the number on the can), to be mended.

As soon as six coolers had been tested in the test kettle, they were then placed in a kettle (of a series of kettles) of boiling water and boiled for an hour and a half, but finally the time was cut down to one hour. The boiling time having expired, the coolers were removed from the kettle to a long table by a block and tackle; and as soon as placed on the table the cans were then tested for hot leaks by striking the top of the cans with a mallet. Having tested the cans for hot leaks, they were then punctured or vented by striking the top with a mallet having a small sharp brad in one side of it. The venting is for the purpose of excluding the air from the can.

The Process Cook In a Salt Brine Bath

Having finished venting the cans, the vents were stopped with a stopping copper. A cover made of thin hoop iron was then fastened over the cans to the coolers, and the coolers were then placed in a kettle (of a second series of kettles) of salt water and were boiled for two hours. The salt was put into the kettle so as to bring the water when boiling to the required heat of 240 degrees, as that high temperature was required to thoroughly cook the fish.

The two hours having passed, the coolers were taken from the second or final cooking and were dipped into a kettle of strong, boiling hot solution of caustic soda to remove all salt, dirt and grease from the cans so that they would be perfectly clean for lacquering. Having been washed in the caustic soda, they were then rinsed with a stream of cold water from a hose and the coolers were spread out on the floor of the packing room to cool. When cold, the cans were tested in the coolers by striking them on the head with a large nail in the same manner as in vogue at this day, and then piled up in piles. The lacquering process in those days was dipping one can at a time in a large can of lacquer and then placing it on a drain rack. The cans being lacquered were then ready to be

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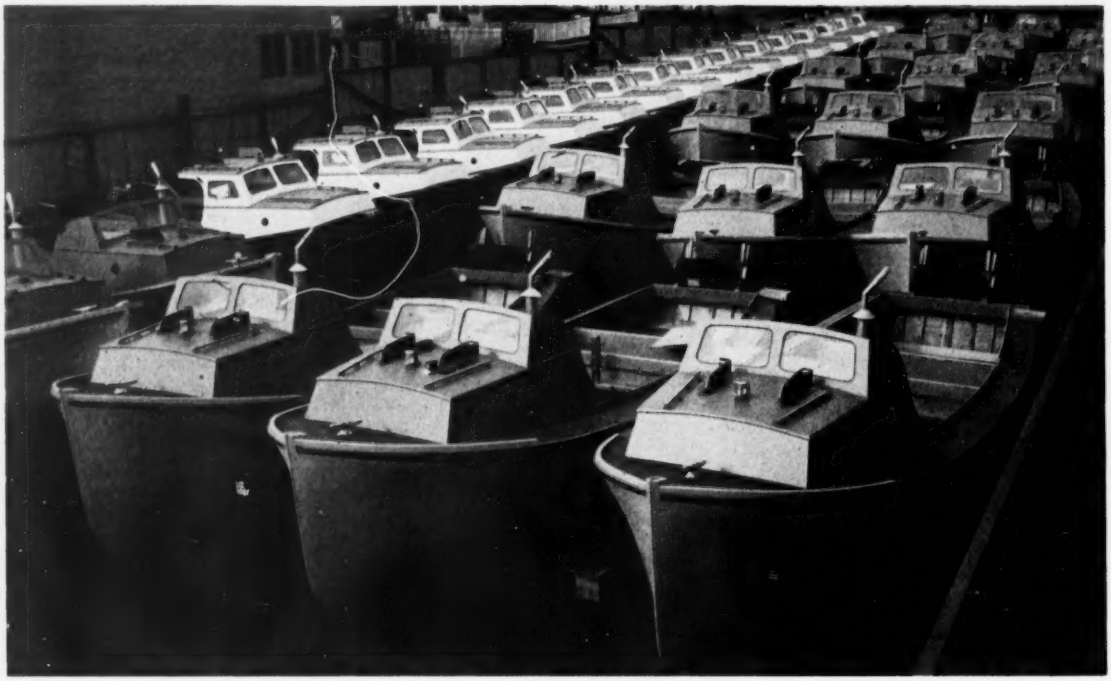

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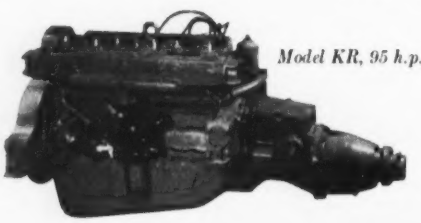

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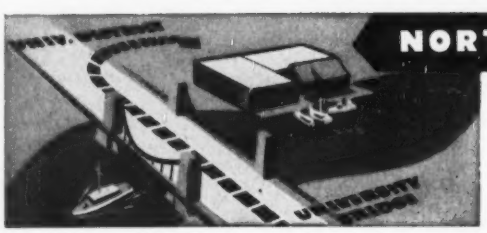
CHRIS-CRAFT powered boats start and operate efficiently under all conditions. Their simplicity facilitates easy maintenance. For either commercial or pleasure use, CHRIS-CRAFT is the world's best engine buy. Available in a wide range of horsepowers, with reduction gears of various ratios in most models.



NORTH END UNIVERSITY BRIDGE

BRYANT'S marina

in SEATTLE
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in SPOKANE
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labeled, that work being done by hand.

In those days the percentage of leaks or swell heads was very large, and a vast amount of cans were thrown away or destroyed, and the canners did not have the knowledge of saving the leaks that they have today, as that knowledge has been acquired after a great many years of experience and experimenting, and the loss of a great many thousands of dollars.

Machine Can-Making

As I have practically given a view of the process in use in the old pioneer days I will now give for comparison, a sketch of the modern methods now in use.

Commencing in the tin shop, we find that the can-making is done completely by machinery, as a number of the canneries are equipped with can-making machines. There are now machines in use, where tin, having been squared by square shears, is passed through slitters and cut into the proper sizes, and then passing through rollers is formed into can bodies, and by a simple device carried through the lock seam attachment which turns over the edges of the tin and presses them together. The seam is then soldered by passing through the soldering attachment of the machine, and coming out is then carried on a belt through a machine that can be adjusted to place either tops or bottoms on the cans. If the topping machine has a crimper attachment, the tops or bottoms are crimped onto the can very tightly. If the machine is without the crimper attachment the can is again carried on a belt and run through a separate crimper, and then through the acid bed to the soldering machine. In the soldering machine the can is carried through by a chain, the can lying flatways at a slight angle, and the bottom end resting against a back bar placed over the soldering pan. As the can is carried through by the chain, the bottom end passes through the space or opening that is between the back and front bars, containing the molten solder, the revolving motion of the can as it is being rolled through, nicely adheres the solder to the tin. From the soldering machine the can is carried upright on a belt, or rolls through a run-way for a distance of about 30 feet and drops into a basket, and is then taken to the storing room to be placed in the pile of cans.

First Fish-Cleaning Machines Are in Use

The cans having been made, and the fish delivered on the wharf, the butchers then proceed to prepare the salmon for the gang knives, which

Handmade cans in the Kinney Cannery of the Columbia River Packers Association, Astoria, in 1902. No longer used as a cannery, this plant is still company headquarters. *(Photo courtesy Tom Wootton.)*

are operated by power. Some of the canneries at the present time are equipped with fish cleaning machines, which, with the aid of a very small number of men, clean the fish very quickly. The fish having been cut into proper lengths, by passing through the gang knives, the pieces fall into a bin and are then passed into the hopper of the can filling machine. The cans are fed into and filled by the machine automatically. The filled cans pass from the filler on a belt through an automatic weighing machine, and by the same belt through the washing machine, and are held in position by a top and bottom clamp, and are washed with a jet of steam, or a jet of steam and water, to remove any slime or particles of fish that may be adhering to the outside of the can. Passing through the washer, they are conveyed by another belt through the topping machine, and the tops are adjusted on to the cans very quickly, and the cans are then conveyed by belt in same manner as in can making, through the crimper, acid bed and soldering machine. Having passed through the soldering machine, they are then conveyed by belt or runway through a small jet of water to cool the solder. At the end of the runway or conveyor they are then placed upright into coolers and the vent hole is stopped with a drop of solder.

Processing by Retort

The coolers are placed in the test kettle and the cans tested in the same manner, as heretofore described, and are then placed upon cars (each car holding six coolers) standing on a track, and are rolled into a steam box. As soon as the box is filled and the door closed, steam is turned on and fish is cooked from 45 minutes to one hour, the temperature being kept at the boiling point (every steam box being fitted with a thermometer). As soon as the cooking time elapses, the cans are removed from the boxes and the coolers are then placed on tables and tested for hot leaks, vented and stopped in the same way as when the kettles were in use. The coolers are again placed on cars and are rolled into iron retorts, door closed, steam turned on and are cooked from 60 to 75 minutes at a temperature of 240 degrees. The salmon being now thoroughly cooked, the cars are rolled from the retort to the kettle containing the solution of caustic soda, and are then rinsed by dipping the coolers into a tank of running water. The coolers are laid out to cool and the cans are tested by sound with a nail. The cans being ready for lacquer are put through a lacquering machine that can handle 1500 cases a day, and from that machine into one or more labeling machines that handle 1,000 cases a day each, and are then cased up ready for shipment.

The percentage of leaks is very small, and very few cans are thrown away, as the leaks are properly taken care of in time.

OPERATING PLANTS IN ALASKA

HAWK INLET **FALSE PASS**

SALMON

Realities came home to the North American salmon canning industry in 1952, when the market value of the combined production of Alaska, British Columbia and the Pacific States dropped by more than $30 million.

This was due to lower selling prices in all categories, to sharply reduced production of Pink salmon in Alaska and on Puget Sound, and to limitation of Canadian production as result of labor disputes and the economic situation resulting from closing of the British market for Canadian canned salmon.

SALMON canning in 1952 continued materially below normal volume, with the North American pack of 5,741,490 cases almost 1 million cases under the average for the decade previous.

Continental output was also off sharply from the previous year, due essentially to economic conditions in the Canadian fishery and to the lower Puget Sound total, normal to the even-numbered year.

Alaska's total of 3,657,104 cases showed but little variation from the pack of the previous year, volume-wise, but there was a general shifting of components. Reds and Chums advanced sharply in the Alaskan pack, while Pinks and Chums declined. The result was a pack of about the same volume as that of 1951. The value, however, was distinctly less, due to lower selling prices for all species.

Preliminary calculations of value fix the Continental pack at $127,388,243 for 1952, of which $99,636,808 was American fish and $27,751,435 Canadian.

The American salmon pack valuations of 1952 divide as follows: Alaska, $78,961,284; Washington, $15,888,930; Oregon, $4,773,302; California, $20,292.

Bristol Bay Reds Fall Short of Expectations

Western Alaska's yield of Red salmon rose sharply from the 1951 level and let the territory produce 1,279,748 cases of this species; but this was a disappointment nonetheless, as the "big year" cycle on Bristol Bay had been counted on for much larger production than was secured.

Good experience elsewhere in the Sockeye fishery, with Copper River producing a record yield; British Columbia topping 1951; and Puget Sound doing better than had been expected, accounted for a Red salmon species total of 1,862,844 cases—which is slightly better than the average for the previous 10 years.

Pink Production Down As Forecast for 1952

Decline of the overall Pink salmon pack occasioned no surprise in 1952, as it was the off-year in several cyclic districts, notably Prince William Sound, Southeast Alaska and Puget Sound. Kodiak Island fishing provided the bright spot in the Pink picture for the year.

Alaska Chum Pack Big

With the pack of 955,439 cases of Chums, Alaska had one of the big years for this species in the recent history of the Territory. True, 1944 packed somewhat more, and so did 1936, but there have only been about seven years since Alaska salmon canning began in 1872 that more Chums have been canned there.

The Puget Sound pack was surprisingly good as well, largely as result of the canning of fish imported from British Columbia.

Canadian pack of Chums — 84,547 cases—was the smallest since 1931, and with that exception the smallest since the previous disaster year 1921. As in both of these preceding record lows, the reason was essentially economic. A big carryover, plus loss of British markets, left little incentive for packing Chums.

The pack of Silver, Coho or Medium Red salmon showed some surprising shifts in 1952. The Alaska pack of the year was far below the extraordinary pack of 1951; but Puget Sound came back with the biggest pack of this species since 1919 to bring the North American pack close to parity with that of the year before.

1952 - Pacific Canned Salmon Packs and Values - 1952

DISTRICT	Red, Sockeye or Blueback		PINK		CHUM		SILVER or COHO		KING or CHINOOK and Steelhead		TOTAL	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Alaska	1,279,748	$35,703,226	1,172,419	$22,056,404	955,439	$15,360,732	193,625	$ 4,369,818	55,873	$1,471,104	3,657,104	$78,961,284
Washington	126,145	5,298,090	2,635	51,026	328,352	5,417,150	175,737	4,287,744	24,256	827,920	657,125	15,881,930
Oregon	7,777	326,634	...	...	6,876	110,016	27,773	777,644	97,664	3,559,008	140,090	4,773,302
California	...	...	...	...	...	...	399	11,172	304	9,120	703	20,292
Total U. S. A.	1,413,670	41,327,950	1,175,054	22,107,430	1,290,667	20,887,898	397,534	9,446,378	178,097	5,867,152	4,455,022	99,636,808
British Columbia	449,174	14,822,742	675,836	10,137,540	84,547	1,099,111	64,095	1,410,090	12,816	281,952	1,286,468	27,751,435
Grand Total	1,862,844	$56,150,692	1,850,890	$32,244,970	1,375,214	$21,987,009	461,629	$10,856,468	190,913	$6,149,104	5,741,490	$127,388,243

Halferty

SEATTLE, U.S.A.

1952-PACIFIC CANNED SALMON PACK-1952

(Figures reduced to uniform basis of 48-lb. ("full case") units.)

Species	Alaska	Puget Sound	Columbia River	Coastal Areas	Total U.S.	British Columbia	Grand Total
Red or Sockeye	1,279,748	122,709	10,336	877	1,413,670	499,174	1,862,844
Pink	1,172,419	2,635	...	...	1,175,054	675,836	1,850,890
Chum or Keta	955,439	311,509	10,898	12,821	1,290,667	84,547	1,375,214
Coho or Silver	193,625	168,297	30,062	5,550	397,534	64,095	461,629
Chinook or King	55,842	6,673	94,769	1,802	159,086	9,064	168,150
Steelhead	31	...	18,980	...	19,011	3,752	22,763
Total	3,657,104	611,823	165,045	21,050	4,455,022	1,286,468	5,741,490

Columbia River Production Cut Short by Strike

Columbia River pack of 1952 was the smallest in the history of that fishery, but the reason was a strike rather than a poor run. Fishermen refused to accept the packers' best offer, with resulting loss of the entire August run, which often accounts for at least half of the season's production.

The loss came primarily in Chinooks, where the pack fell below 100,000 cases for the first time since 1869.

Significantly, the strike resulted not so much from price as from an attempt by the fishermen to force a contract which would declare them to be employes rather than independent producers selling their own fish.

The terrific economic loss arising from this strike was demonstrated by the exceptionally heavy escapement which was counted over the Bonneville Dam during the period when fishing on the lower river was suspended.

NORTH AMERICAN CANNED SALMON PACK

Year	Red, Sockeye or Blueback	Pink	Chum or Keta	Medium Red Coho or Silverside	King or Chinook	Steelhead Trout	Total Cases	Year
1898	1,594,162	109,399	51,530	282,589	398,564	26,277	2,462,521	1898
1899	2,153,388	401,892	61,932	261,071	334,974	11,994	3,225,251	1899
1900	2,046,908	232,022	155,208	208,026	338,493	20,597	3,001,254	1900
1901	3,801,730	585,017	86,230	126,535	455,395	20,000	5,074,907	1901
1902	2,702,045	549,602	313,603	227,031	379,641	8,593	4,180,515	1902
1903	2,231,555	564,507	61,232	330,319	403,836	7,251	3,598,700	1903
1904	1,950,949	299,333	168,235	168,235	444,472	9,868	3,041,092	1904
1905	3,488,322	253,559	138,642	269,806	443,794	9,822	4,603,945	1905
1906	2,122,204	416,602	450,151	397,346	424,974	6,500	3,817,777	1906
1907	1,707,813	1,114,100	272,135	397,786	354,209	6,604	3,852,647	1907
1908	2,186,325	726,656	303,837	386,745	379,171	11,863	3,994,597	1908
1909	3,671,555	882,410	218,987	373,567	262,554	17,382	5,426,455	1909
1910	2,274,780	589,043	555,908	521,966	372,901	5,576	4,320,174	1910
1911	1,869,927	2,373,595	592,790	676,141	627,714	8,618	6,104,887	1911
1912	2,544,435	1,556,128	808,630	621,817	426,338	7,198	5,956,953	1912
1913	4,643,425	2,392,166	432,812	300,033	285,472	9,539	8,063,447	1913
1914	3,121,964	1,222,013	1,200,433	579,980	509,100	11,292	6,644,782	1914
1915	2,492,865	2,825,570	1,107,707	551,821	641,979	29,650	7,639,592	1915
1916	2,432,048	2,036,077	1,500,332	715,815	646,341	24,999	7,355,612	1916
1917	3,248,843	3,929,332	1,648,313	588,749	673,980	35,677	10,124,894	1917
1918	2,987,710	2,953,245	2,175,031	838,088	697,140	41,086	9,692,300	1918
1919	1,707,846	2,426,414	2,367,481	793,175	704,195	24,392	8,023,503	1919
1920	1,892,691	2,138,959	1,175,001	361,566	705,050	16,054	6,289,321	1920
1921	2,034,310	1,038,090	359,947	362,943	419,508	11,362	4,226,160	1921
1922	2,480,811	2,241,760	908,283	510,919	353,588	26,640	6,522,001	1922
1923	2,309,142	3,371,917	1,120,591	534,225	389,802	27,757	7,753,434	1923
1924	1,902,832	3,295,739	1,835,251	542,682	406,096	31,270	7,990,543	1924
1925	1,581,792	3,111,320	1,803,371	667,817	550,071	17,248	7,731,610	1925
1926	2,550,771	4,101,422	1,762,134	607,778	485,783	86,233	9,544,126	1926
1927	1,738,054	2,241,304	1,217,338	642,522	538,574	33,377	6,411,169	1927
1928	2,214,498	3,583,433	2,165,652	602,203	354,798	17,492	8,938,076	1928
1929	2,100,787	3,775,764	1,541,213	564,826	375,497	24,821	8,382,908	1929
1930	1,710,018	4,266,301	1,085,351	758,451	427,282	18,509	8,265,912	1930
1931	2,084,385	3,890,755	671,574	388,140	418,483	13,679	7,467,016	1931
1932	2,484,459	2,341,966	1,313,537	446,706	394,830	14,386	6,995,884	1932
1933	2,579,891	3,259,341	1,021,547	402,107	343,442	19,486	7,625,814	1933
1934	3,354,863	4,261,262	1,362,905	596,951	352,752	16,183	9,944,916	1934
1935	1,232,852	4,139,114	1,303,216	596,117	279,693	15,484	7,566,476	1935
1936	2,968,184	5,181,954	1,846,675	533,285	313,795	20,350	10,864,243	1936
1937	2,494,302	4,532,487	1,233,999	369,916	385,986	18,412	9,035,372	1937
1938	3,125,176	3,623,435	1,387,245	595,380	234,520	16,283	8,982,039	1938
1939	2,280,088	3,412,392	1,054,858	472,239	254,930	26,090	7,500,597	1939
1940	1,402,999	3,124,292	1,553,389	592,395	286,485	34,443	6,994,003	1940
1941	1,763,852	5,218,427	1,770,225	831,279	422,989	36,597	10,043,369	1941
1942	1,860,044	3,088,724	1,723,193	616,687	343,369	26,507	7,658,524	1942
1943	2,169,091	2,913,760	1,258,239	377,160	196,000	19,357	6,933,608	1943
1944	1,869,365	2,478,750	1,239,548	383,040	223,088	23,143	6,216,934	1944
1945	1,556,200	3,374,192	1,041,387	457,680	194,056	22,125	6,645,640	1945
1946	1,893,469	2,176,817	1,267,478	316,968	230,811	21,880	5,907,423	1946
1947	2,197,569	2,962,281	1,127,496	438,087	366,620	25,325	7,117,378	1947
1948	1,994,733	1,630,411	1,551,190	577,726	354,475	26,027	6,134,562	1948
1949	1,335,248	3,946,309	946,615	492,871	229,031	11,305	6,961,380	1949
1950	1,698,290	1,544,327	1,816,745	468,768	215,114	13,777	5,757,022	1950
1951	1,364,419	2,737,445	1,443,330	779,725	258,530	18,517	6,601,966	1951
1952	1,862,844	1,850,890	1,375,214	461,629	168,150	22,763	5,741,490	1952
10 Yr. Average	1,794,123	2,561,518	1,306,724	475,365	243,588	20,422	6,401,740	10 Yr. Average

NOTE: — Figures represent full cases of 48 lbs. net. "Average" is for the last ten years. Figures for the last year shown are from "Pacific Fisherman's" compilation; those for previous years have been revised from official data.

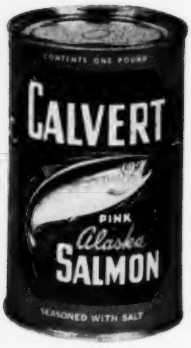
canned **S** *almon*

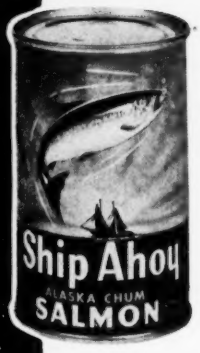
H *from the* *eight of the run*

handled **I** *ntelligently*

E *by people of* *xperience*

L *with profound* *oyalty to customers*





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TODD PACKING CO.
UGANIK FISHERIES, INC.

PACK OF CANNED SALMON IN ALASKA BY DISTRICTS

Year	SOUTHEAST ALASKA							CENTRAL ALASKA							WESTERN ALASKA							# Plants Operated	TOTAL CASES	Year
	Plants Operated	Red	Pink	Chum	Coho	King	Total Cases	Plants Oper.	Red	Pink	Chum	Coho	King	Total Cases	Plants Oper.	Red	Pink	Chum	Coho	King	Total Cases			
1905	13	207,375	142,008	37,685	41,079	5,460	433,607	9	345,575	3,235	. . .	16,518	6,427	371,755	25	1,021,478	23,354	4,287	9,797	30,238	1,089,154	47	1,894,516	1905
1906	20	250,567	326,713	131,405	84,149	2,396	795,230	8	451,659	3,188	. . .	10,316	7,861	473,024	19	798,504	19,866	123,407	16,278	20,680	978,735	47	2,246,989	1906
1907	22	177,149	542,268	140,392	58,632	1,289	919,730	8	482,968	10,255	. . .	15,258	14,355	522,836	18	657,687	18,244	44,025	11,784	27,794	759,534	48	2,202,100	1907
1908	23	198,366	592,638	180,204	48,963	2,552	1,022,723	8	377,101	30,661	. . .	11,543	6,416	425,721	19	1,087,211	20,834	38,309	8,426	14,824	1,169,604	50	2,618,048	1908
1909	19	280,542	455,999	83,001	39,920	857	860,319	8	358,285	5,581	. .	10,275	16,913	391,054	18	1,074,667	3,293	37,711	6,361	30,264	1,152,296	45	2,403,669	1909
1910	23	282,265	494,363	231,735	82,620	402	1,091,385	10	364,875	31,797	131	19,928	15,786	432,517	19	825,447	31,348	22,352	11,641	24,087	914,138	52	2,438,777	1910
1911	32	238,895	969,866	290,843	100,793	1,441	1,601,838	11	412,647	24,143	2,008	17,326	15,862	471,986	21	669,163	27,347	10,969	11,585	28,075	747,139	64	2,820,963	1911
1912	51	254,851	1,053,847	589,578	134,914	6,607	2,039,777	14	422,347	136,891	29,591	19,782	14,198	622,809	22	1,227,060	114,247	19,359	15,088	21,789	1,397,543	87	4,060,129	1912
1913	42	190,685	1,299,400	254,689	58,071	1,006	1,803,851	14	364,253	49,299	5,038	13,284	15,393	447,267	23	1,419,381	54,217	7,927	6,022	11,768	1,505,315	79	3,756,433	1913
1914	45	294,842	872,504	597,435	112,163	12,087	1,889,031	14	395,110	195,830	17,693	36,739	11,132	656,504	23	1,511,622	29,489	47,350	8,890	24,946	1,622,297	82	4,167,832	1914
1915	46	229,709	1,820,171	375,260	90,161	25,135	2,540,436	17	500,000	43,951	39,404	26,062	22,978	632,395	23	1,192,248	6,251	69,744	10,347	37,581	1,316,171	86	4,489,002	1915
1916	54	182,075	1,335,291	505,405	182,405	18,482	2,223,658	19	572,096	371,845	64,320	55,298	22,160	1,085,719	27	1,365,271	46,410	145,513	27,481	25,537	1,610,212	100	4,919,589	1916
1917	60	202,951	2,149,075	750,187	152,538	29,657	3,284,408	26	725,925	137,955	86,764	36,065	19,236	1,005,945	29	1,556,005	11,436	40,762	5,105	18,659	1,631,967	113	5,922,320	1917
1918	75	226,108	2,034,997	954,498	152,689	17,248	3,385,540	29	662,829	358,491	313,196	47,904	21,818	1,404,238	30	1,729,622	24,724	98,965	15,979	18,301	1,887,591	134	6,677,369	1918
1919	75	240,208	1,521,897	1,146,943	169,300	30,016	3,108,364	30	437,341	107,924	163,530	54,596	12,075	775,466	28	526,794	27,613	37,989	6,242	109,642	707,280	133	4,591,110	1919
1920	80	199,829	1,026,862	830,538	112,178	32,869	2,202,276	35	533,122	510,350	148,122	67,744	20,417	1,279,755	28	742,829	76,222	44,048	12,389	37,990	913,478	143	4,395,509	1920
1921	30	105,084	416,958	182,272	90,845	9,034	804,193	27	596,200	13,116	28,305	11,425	10,225	659,271	27	1,057,510	10,397	37,029	7,513	29,060	1,141,509	84	2,604,973	1921
1922	57	121,652	1,313,280	425,947	128,023	5,777	1,994,679	36	567,576	331,005	88,321	36,623	8,930	1,032,455	28	1,386,169	13,261	48,228	9,666	16,897	1,474,221	121	4,501,355	1922
1923	67	178,962	2,257,768	434,490	129,990	12,857	3,014,067	39	441,774	197,291	72,821	32,940	11,537	756,363	30	1,257,594	77	19,834	822	14,583	1,292,910	136	5,063,340	1923
1924	65	192,806	1,686,884	799,215	110,002	8,259	2,797,166	38	442,876	892,667	192,901	68,883	10,593	1,607,920	31	814,042	33,517	35,067	2,322	14,889	899,837	134	5,305,923	1924
1925	62	151,140	1,701,849	835,599	94,539	12,493	2,795,611	37	364,721	402,801	199,797	68,267	19,289	1,054,875	30	549,429	590	29,999	1,393	18,992	600,403	129	4,450,898	1925
1926	61	173,891	2,158,699	618,397	96,389	10,679	3,058,055	43	630,505	1,144,180	243,808	104,309	23,683	2,146,485	28	1,352,691	35,470	40,238	1,829	18,114	1,448,342	132	6,652,882	1926
1927	62	115,664	581,728	224,696	114,331	9,131	1,045,823	47	320,159	833,028	253,410	138,243	42,948	1,587,788	29	884,740	. . .	29,262	55	18,404	932,461	138	3,566,072	1927
1928	60	106,793	2,137,796	566,689	145,323	5,596	2,962,197	62	431,924	643,816	378,499	152,066	32,567	1,638,872	29	1,405,344	3,852	46,316	497	13,032	1,469,041	151	6,070,110	1928
1929	59	161,580	1,541,463	290,742	97,850	6,982	2,098,617	70	455,997	1,028,790	498,873	68,538	36,526	2,088,544	30	1,075,473	253	71,261	5,862	30,232	1,183,081	159	5,370,242	1929
1930	57	216,743	2,296,270	283,553	155,844	10,894	2,963,304	68	270,310	839,751	281,111	170,741	32,123	1,594,036	27	361,734	14,631	31,336	3,403	20,543	431,647	152	4,988,987	1930
1931	41	148,485	2,038,388	277,225	88,841	14,926	2,567,865	49	439,572	940,124	193,131	81,275	27,567	1,681,669	25	1,107,725	. . .	66,553	92	8,631	1,183,001	115	5,432,535	1931
1932	31	140,356	1,380,093	582,290	88,293	23,637	2,214,669	34	659,539	720,893	145,660	60,363	32,317	1,618,772	22	1,304,832	15,587	93,178	695	12,755	1,427,047	87	5,260,488	1932
1933	38	81,122	1,477,608	425,869	95,629	8,130	2,088,358	31	486,528	703,696	207,363	64,548	23,792	1,485,927	23	1,614,721	2,139	25,013	1,456	9,084	1,652,413	92	5,226,698	1933
1934	47	104,413	2,622,186	393,904	159,509	15,606	3,295,618	45	707,754	1,198,457	307,649	74,832	27,005	2,315,697	22	1,813,835	1,959	33,502	1,219	8,756	1,859,271	114	7,470,586	1934
1935	46	159,506	2,209,373	541,152	141,501	11,496	3,063,028	44	391,088	1,045,155	302,011	47,198	24,338	1,809,790	9	272,581	. . .	9,567	219	641	283,008	99	5,155,826	1935
1936	46	219,531	2,959,774	784,455	136,043	22,105	4,121,908	46	839,243	1,598,585	295,956	80,608	31,820	2,846,212	24	1,423,781	30,911	26,572	1,581	3,983	1,486,828	116	8,454,948	1936
1937	45	165,170	2,138,264	503,235	86,912	30,613	2,924,194	47	459,399	1,480,658	190,425	42,028	31,234	2,209,744	24	1,476,585	376	35,454	138	7,547	1,520,100	116	6,654,038	1937
1938	39	189,880	1,886,104	473,619	140,791	16,339	2,706,733	42	484,518	1,336,000	253,905	75,596	20,146	2,170,165	17	1,848,725	. . .	59,335	345	6,241	1,914,646	98	6,791,544	1938
1939	48	195,907	1,474,269	293,316	65,906	2,364	2,031,762	47	657,198	1,034,623	237,148	37,250	21,023	1,987,242	24	1,118,233	627	95,948	. . .	5,399	1,220,207	119	5,239,211	1939
1940	46	125,462	1,452,037	484,476	155,577	1,539	2,219,091	42	384,266	1,441,266	343,072	126,878	18,359	2,314,475	11	443,653	14,088	32,991	1,675	2,405	494,812	99	5,028,378	1940
1941	47	137,861	3,631,491	321,118	193,751	1,812	4,286,033	44	413,658	1,005,029	333,618	159,023	30,825	1,942,153	19	613,369	129	55,771	3,439	5,609	678,317	105	6,906,503	1941
1942	47	121,083	1,758,741	597,373	189,210	2,033	2,668,779	44	352,475	1,051,359	328,860	180,698	34,916	1,948,308	7	438,111	8,550	16,556	2,629	6,178	472,024	98	5,089,109	1942
1943	34	85,313	1,042,610	672,359	92,245	1,868	1,894,395	34	582,287	1,277,915	167,809	66,311	37,421	2,131,743	14	1,314,575	1,532	42,410	178	11,676	1,370,371	81	5,396,509	1943
1944	38	131,580	1,081,334	655,188	88,380	1,765	1,958,247	45	461,718	1,002,056	286,498	96,255	29,718	1,876,245	13	987,459	3,932	44,039	2,418	5,456	1,043,304	94	4,877,796	1944
1945	41	129,514	1,039,521	265,845	107,425	2,582	1,544,887	43	434,872	1,198,665	331,654	85,506	30,041	2,080,738	8	609,132	1,623	92,551	3,103	9,086	715,495	92	4,341,120	1945
1946	41	59,029	999,443	321,037	94,074	1,612	1,475,195	48	350,728	1,053,605	257,909	96,301	25,356	1,783,899	20	656,141	4,073	38,209	2,686	10,906	712,015	108	3,971,109	1946
1947	40	56,032	680,693	260,666	72,434	4,019	1,073,844	47	470,056	1,034,475	196,731	74,388	34,790	1,810,430	21	1,350,151	8,449	42,814	1,893	14,885	1,418,192	107	4,302,466	1947
1948	39	39,317	683,972	403,959	165,033	5,973	1,298,254	57	318,638	616,822	291,977	69,259	34,774	1,331,470	24	1,277,508	3,250	78,725	7,507	13,898	1,380,888	120	4,010,612	1948
1949	36	39,485	2,102,604	243,080	125,059	1,046	2,511,274	55	391,244	580,438	221,089	59,409	37,213	1,289,393	21	529,859	. . .	44,140	4,411	11,974	590,384	112	4,391,051	1949
1950	36	49,475	535,662	500,422	116,344	560†	1,202,463	55	513,985	558,263	242,301	68,233	40,386	1,423,158	21	590,048	1,609	35,056	6,924	13,375	647,012	112	3,272,643	1950
1951	42	70,317	1,226,582	466,334	264,393	636	2,028,262	59	362,554	333,091	227,632	72,762	71,648	1,067,687	13	339,592	75	25,521	8,003	15,328	388,519	114	3,484,468	1951
1952	40	68,754	594,283	531,862	121,090	2,451	1,318,440	48	368,999	575,847	382,214	64,878	34,109	1,426,047	21	841,995	2,289	41,363	7,657	19,313	912,617	109	3,657,104	1952
Aver.	39	72,881	998,570	432,075	124,648	2,260	1,630,526	49	425,508	823,117	260,581	75,230	37,645	1,622,081	18	849,646	2,683	48,483	4,478	12,590	917,880	105	4,170,488	Aver.

NOTE: — "Average" is for last ten years. Figures for last year are from "Pacific Fisherman's" own compilation, and include, as far as possible, the pack from Freezership fish. Figures for previous years are from official U.S. data, and cover fish canned in Alaska only.

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SALMON
ALASKA

Peculiar distribution pattern was obvious in the limited Alaska canned salmon pack of 1952 — one of the poorest volume-wise in the entire history of the industry.

Reds and Pinks again showed the alternating up-and-down in relative abundance of the two species which has marked production for several seasons.

Cohoes, which peaked in 1951, dropped back to normal; but Chums were abundant, with the largest pack since 1944, exceeded only three times in the last 25 years.

RANKING feature of the general Alaska canned salmon picture of 1952—aside from the overall scanty production—was the remarkable pack of Chums.

Falling only a little below a million cases, the 1952 Alaska Chum pack was the heaviest since 1944, and actually has been exceeded only eight times since salmon canning began, thrice in the last 25 years.

The Chum pack for the territory as a whole was roughly 200,000 cases above the 10-year average.

While Southeast Alaska was of course, the principal source of Chums —with 115,000 cases canned during the short fall season alone—the greater percentage increase in Chum production came in Central Alaska, where the 1952 pack stood as an increase of approximately 160,000 cases over the 233,000-case decade average.

Quality of the Alaska Chums of 1952 was generally rated very good. The fall-packed goods stood-up well with any in comparison, due apparently to the fact that fall fishing was opened only in bays known to be frequented by fall Chums of good quality.

The Coho production, which peaked in a record in 1951, was only a little

UNITED STATES CANNED SALMON PACK

YEAR	Red or Sockeye	Pink	Chum or Keta	Med. Red Coho or Silverside	King or Chinook	Steelhead	GRAND TOTAL	YEAR
1916	2,217,259	1,755,433	1,260,131	529,096	579,615	19,013	6,360,547	1916
1917	2,908,995	3,432,573	1,173,040	431,160	597,704	23,937	8,567,409	1917
1918	2,711,251	2,425,500	1,677,416	647,020	589,786	25,170	8,076,143	1918
1919	1,338,401	2,079,775	1,995,446	593,192	664,844	19,899	6,630,347	1919
1920	1,541,286	1,618,103	1,090,103	251,533	586,749	13,659	5,101,705	1920
1921	1,879,396	845,184	288,539	238,595	369,756	10,142	3,622,612	1921
1922	2,181,197	1,659,781	650,079	491,643	313,992	24,983	5,231,675	1922
1923	1,974,495	2,930,985	702,536	415,084	362,660	25,997	6,411,757	1923
1924	1,533,237	2,619,013	1,266,654	418,336	378,218	29,862	6,245,320	1924
1925	1,187,784	2,659,144	1,214,304	477,159	481,071	14,859	6,034,321	1925
1926	2,218,638	3,334,787	1,067,053	429,942	408,136	33,128	7,491,684	1926
1927	1,430,116	1,993,679	656,911	459,209	481,914	31,643	5,053,472	1927
1928	2,010,956	2,791,061	1,302,422	445,496	335,907	16,605	6,902,447	1928
1929	1,819,469	3,298,127	1,115,924	367,847	358,085	24,104	6,983,556	1929
1930	1,232,340	3,154,364	683,451	566,250	390,756	16,932	6,044,093	1930
1931	1,792,111	3,684,092	615,441	285,930	390,563	12,355	6,780,492	1931
1932	2,200,104	2,118,250	1,006,776	257,735	318,770	13,218	5,914,853	1932
1933	2,321,784	2,726,783	727,917	243,055	323,176	18,027	6,360,742	1933
1934	2,876,981	3,825,989	849,721	371,521	322,968	14,901	8,361,990	1934
1935	882,408	3,624,148	893,612	364,625	257,773	14,888	6,037,454	1935
1936	2,553,160	4,590,422	1,249,188	287,224	283,941	19,282	8,983,217	1936
1937	2,168,528	3,947,271	786,397	236,708	369,725	17,568	7,526,197	1937
1938	2,677,723	3,222,559	845,433	294,257	218,989	15,248	7,274,209	1938
1939	2,020,200	2,791,790	668,274	227,143	238,827	25,293	5,971,527	1939
1940	1,040,241	2,910,972	919,368	375,668	269,217	33,436	5,548,902	1940
1941	1,308,740	4,790,573	851,902	440,653	372,624	33,162	7,779,654	1941
1942	1,194,985	2,819,501	1,089,555	406,032	320,531	21,911	5,852,515	1942
1943	2,004,204	2,384,185	895,265	191,135	185,340	16,261	5,676,391	1943
1944	1,618,729	2,087,621	987,382	202,364	203,761	19,222	5,119,079	1944
1945	1 227,162	2,549,848	693,303	239,086	181,367	19,314	4,910,580	1945
1946	1,350,629	2,060,243	694,728	217,004	222,744	17,767	4,563,115	1946
1947	1,911,284	2,363,069	666,497	293,058	356,665	22,091	5,612,664	1947
1948	1,734,091	1,308,689	1,054,637	370,610	338,037	20,362	4,826,426	1948
1949	1,075,427	3,236,317	718,878	277,495	207,868	8,931	5,524,916	1949
1950	1,290,249	1,097,811	1,317,761	352,126	205,981	10,534	4,274,462	1950
1951	936,120	2,001,352	981,524	466,860	244,832	14,862	4,645,570	1951
1952	1,413,670	1,175,054	1,290,667	397,534	159,086	19,011	4,455,022	1952
10 Yr. Average	1,456,156	2,026,419	930,114	300,729	230,568	16,835	4,960,823	10 Yr. Average

NOTE: — Figures represent full cases of 48 lbs. net. "Average" is for the last ten years. Figures for the last year shown are from "Pacific Fisherman's" compilation; those for previous years have been revised from official data.

SINCE 1895

KELLEY–CLARKE CO.

2460 SIXTH AVE. SOUTH • SEATTLE 4, WASHINGTON

SELLING AGENTS

CANNED SALMON

NORTHWEST TUNA

KELLEY-CLARKE ESTAB. 1895 COMPANY

DUNGENESS CRABMEAT

1952 - WESTERN ALASKA CANNED SALMON PACK - 1952

	COMPANY	CANNERY LOCATION	RED 1-lb. Talls & Flats	RED ½-lb. Flats (60 cans)	RED Total (Std. cases)	PINK 1-lb. Talls	CHUM 1-lb. Talls, etc.	COHO 1-lb. Talls, etc.	KING or CHINOOK 1-lb. Talls & Flats	KING or CHINOOK ½-lb. Flats (60 cans)	KING or CHINOOK Total (Std. cases)	GRAND TOTAL (full cases)	
		Nushagak	10,911	...	10,911	135	3,164	72	408	...	408	14,690	
		Naknek	65,552	...	65,552	...	1,222	2	95	...	95	66,871	
1	Alaska Packers Assn.	Kvichak	87,701	...	87,701	91	1,730	...	350	...	350	89,872	1
		Egegik	18,120	...	18,120	1	413	22	49	...	49	18,605	
		Ugashik	10,118	...	10,118	...	909	100	59	...	59	11,186	
2	Bering Trading Co.	Alakanuk (Yukon River)	...	...	...	...	...	(a) 864	...	5,021	5,021	5,885	2
3	Bristol Bay Packing Co.	Pederson Point	(b)45,272	...	45,272	72	746	...	(b) 96	...	96	46,186	3
		Dillingham	3,610	1,366	4,976	110	2,178	64	153	135	288	7,616	
4	Columbia River Packers Assn., Inc.	Nushagak	4,544	...	4,544	62	1,768	14	823	...	823	7,211	4
		Naknek	60,008	...	60,008	...	1,379	...	206	...	206	61,593	
5	Egegik Packing Co.	Egegik	13,285	1,400	14,685	3	366	18	54	...	54	15,126	5
6	Intercoastal Packing Co.	Pederson Point (c)	24,381	...	24,381	39	400	...	51	...	51	24,871	6
7	Libby, McNeill & Libby	Ekuk, Libbyville, Koggiung & Egegik	134,128	...	134,128	338	6,716	111	6,601	...	6,601	147,894	7
8	Maile & Marlatt	Naknek	481	...	481	2	3	49	...	...	...	535	8
9	Nakat Packing Corporation	Nakeen	53,004	3,790	56,794	73	(d)1,272	...	127	...	127	58,266	9
10	Naknek Packing Co.	Naknek	980	...	980	...	...	...	...	...	...	980	10
11	Northern Commercial Co.	Kwiguk (Yukon River)	...	...	...	...	...	...	...	2,785	2,785	2,785	11
12	Pacific American Fisheries, Inc.	Dillingham, Naknek, "Neva" (fl) & Pt. Moller†	(e)67,553	3,994	71,547	288	12,354	6,149	569	251	820	91,158	12
13	Peninsula Packers	Naknek & Port Moller (fl)	43,002	...	43,002	59	1,163	17	76	...	76	44,317	13
14	Queen Fisheries, Inc.	Bristol Bay (fl)	...	8,222	8,222	...	(a)1,415	...	...	1,015	1,015	10,652	14
15	Wards Cove Packing Co. †	Red Salmon (Naknek)	54,232	...	54,232	...	568	...	55	...	55	54,855	15
16	L. G. Wingard Packing Co.	Ugashik	10,119	...	10,119	...	908	104	60	...	60	11,191	16
	Miscellaneous	Various Points	6,481	...	6,481	13	205	3	251	...	251	6,953	
	TOTAL CANNERIES		713,482	18,772	732,254	1,286	38,879	7,589	10,083	9,207	19,290	799,298	
	PACK FROM BRISTOL BAY SALMON, FROZEN AND CANNED ELSEWHERE ††												
1	Alaska Reefer Fisheries	"Alaska Reefer" (A)	10,157	...	10,157	...	99	...	...	...	...	10,256	1
2	American Packing Co. & Western Boat Building Co.	"Western Ace" (B)	9,773	...	9,773	...	301	...	...	...	...	10,074	2
3	Arctic Maid Fisheries	"Arctic Maid" (A)	10,125	...	10,125	...	...	...	...	...	...	10,125	3
4	Bez Brothers	"Toni B" (C)	10,582	...	10,582	12	166	4	15	...	15	10,779	4
5	Global Fishing Co.	"Sea Lark" (D)	8,984	...	8,984	4	200	...	4	...	4	9,192	5
6	Grimes Packing Co.	"Alert" (E)	2,320	...	2,320	...	24	...	...	...	...	2,344	6
		"Reefer II"	(F) 2,908	...	2,908	...	...	...	...	...	...	2,908	
7	Malashina Fisheries Co.	"Michelle Eve" (G)	1,635	...	1,635	...	5	...	...	...	...	1,640	7
8	M/V "North Star" & Owners	"North Star" (H)	12,845	3,694	16,539	...	(1) 628	...	...	...	...	17,167	8
9	Pacific Queen Fisheries	"Pacific Queen" (H)	10,139	77	10,216	...	87	...	...	...	...	10,303	9
10	Pacific Reefer Fisheries	"Pacific Reefer" (A)	7,802	...	7,802	7	95	...	4	...	4	7,908	10
		"Scarlet Queen" (I)	6,651	...	6,651	10	167	...	...	...	...	6,828	
		"Washington Star" (A)	2,240	...	2,240	...	14	...	...	...	...	2,254	
11	Reefer King Co.	"Reefer King" (J)	3,597	710	4,307	(2) 970	553	64	...	...	...	5,894	11
12	Sundown Fisheries	"Sundown" (K)	73	...	73	...	...	...	...	...	...	73	12
13	Andrew Vilicich	"California" (B)	2,617	...	2,617	...	104	...	...	...	...	2,721	13
		"Marsha Ann" (B)	2,660	...	2,660	...	41	...	...	...	...	2,701	
14	John S. York	"K-J" (L)	152	...	152	...	...	...	...	...	...	152	14
	TOTAL FREEZERSHIPS		105,260	4,481	109,741	1,003	2,484	68	23	...	23	113,319	
	GRAND TOTAL		818,742	23,253	841,995	2,289	41,363	7,657	10,106	9,207	19,313	912,617	

(1) Includes 222 full cases Halves. (2) Includes 502 full cases Halves.

NOTES- † Packs of Pacific American Fisheries, Inc. are tabulated in detail on another page of this issue.

(a) Halves, full cases. (b) Includes 1-lb. Flats, 5,039 cases Reds and 3 cases Kings. (c) Canned through joint operation in plant of Bristol Bay Packing Co. (d) Includes Halves, 719 full cases. (e) Includes 1-lb. Flats, 5,117 cases. (f) Formerly operated under name of Red Salmon Co.

†† Bristol Bay salmon from Freezerships was custom-canned in plants of various companies in other districts, as follows:

(A) Washington Fish & Oyster Co., Seattle. (B) American Packing Co., Anacortes. (C) Peninsula Packers, floating, and New England Fish Co., Everett, Wash. (D) Dressel-Collins Fish Co., Seattle, and Peninsula Packers, floating. (E) Dressel-Collins Fish Co., Seattle. (F) Canned in 4-lb. Flats, in plant of Friday Harbor Packing Co. (G) Ouzinkie Packing Co., Ouzinkie, Alaska. (H) Various Puget Sound plants. (I) San Juan Fishing & Packing Co. (J) Washington Fish & Oyster Co., Port Williams, Alaska, & Farwest Fishermen, Inc, Anacortes, Wash. (K) The "Sundown", with 56,339 salmon (equivalent to about 4,400 cases) was lost in Unimak Pass enroute to Seattle. Pack tabulated was canned in plant of Washington Fish & Oyster Co., Seattle. (L) Haines Oyster Co., Seattle.

more than half as great in 1952, dropping back to close-to-normal volume; with growing indication of the possible emergence of a three-year periodicity in the production of this species.

Bristol Bay Reds Small

Beside the unexpectedly short pack of Bristol Bay Reds, discussed in detail under that district, the Red salmon operations of 1952 were featured by the relatively small size of the fish. To a considerable degree this accounted for the decline in the pack on the Naknek-Kvichak side of Bristol Bay —although of course, it could not produce the numerical scarcity so obvious on the Nushagak.

In 1952 Bristol Bay operators found that from 13½ to 13¾ fish were required to pack a case, where 12 fish is generally regarded as the normal requirement.

18 Freezerships Active

With 18 freezerships active, against 9 in 1951, the pack of salmon frozen on Bristol Bay for subsequent canning reached 1,316,065 fish in 1952.

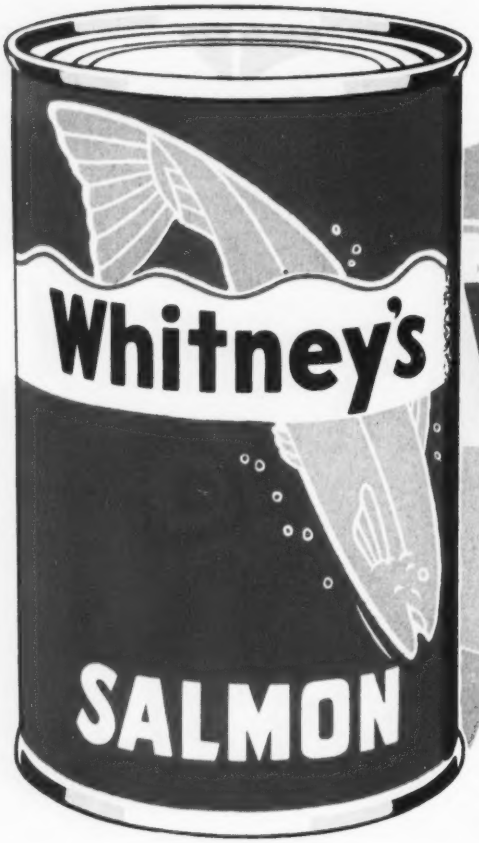
(It should be noted that this figure covers only fish secured by freezerships on Bristol Bay; and does not include fish frozen by some of the vessels later in Central and Southeast Alaska.)

Of the Bristol Bay freezership pack, 1,181,861 fish were taken from the Naknek-Kvichak area; 127,596 fish from Egegik; and 6,608 fish from Ugashik.

Japanese Fish Salmon With High Seas Gear

Japanese high seas fishing operations, conducted west of the "abstention line" fixed at 175° west longitude by the Tripartite Treaty, were successful in taking a substantial quantity of salmon by drift gillnet methods in the open ocean south of Kiska and thence west toward the Asian mainland.

Official Japanese figures give the catch as: Reds, 737,489 fish; Chums, 638,571 fish; Pinks, 701,157 fish. The 1953 Japanese operations are expected to double those of 1952 in number of vessels engaged.



Whitney's

CANNED SALMON

A FOUR VARIETY ADVERTISED LABEL

THE FOUR Whitney's Canned Salmon Labels are right out there in the public eye . . . right up front in bidding for customer preference. The compelling story of Whitney's Controlled QUALITY is being dramatized through Radio . . . Television . . . Newspapers . . . Store Merchandising. Alert dealers are realizing more stock turnover by recognizing Whitney's as . . .

THE BIG 4 OF THE SALMON PACK

WHITNEY & COMPANY • CENTRAL BUILDING • SEATTLE, WASHINGTON

SALMON
WESTERN ALASKA

Pack of Canned Salmon in Alaska by Species and Values

Salmon fishing in Alaska commenced in 1878, but no segregation of the packs by species is available prior to 1896, while the valuations were not recorded prior to 1905. Earlier total packs, starting with 8,159 cases in 1878, ranged from 6,539 cases in 1880 to a peak of 801,400 in 1891, the output in 1895 being 626,530 cases. The average from the beginning through 1895 was 291,973 cases.

The "Average" figures at bottom of table are for the last ten years. Values are based on opening prices, or on prices at which the bulk of the packs were sold.

YEAR	RED, SOCKEYE		PINK		CHUM		COHO		KING		TOTAL		YEAR
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1896	806,010	....	111,986	....	452	....	37,017	....	11,242	....	966,707	....	1896
1897	688,581	....	157,711	....	1,396	....	43,557	....	17,883	....	909,070	....	1897
1898	782,941	....	109,399	....	5,184	....	54,711	....	12,862	....	965,997	....	1898
1899	864,254	....	149,159	....	1,931	....	39,402	....	23,400	....	1,078,146	....	1899
1900	1,197,406	....	232,022	....	30,012	....	50,984	....	37,715	....	1,548,139	....	1900
1901	1,319,335	....	541,427	....	47,464	....	65,509	....	43,069	....	2,016,804	....	1901
1902	1,685,546	....	549,602	....	159,849	....	82,723	....	59,104	....	2,536,824	....	1902
1903	1,687,244	....	355,799	....	35,052	....	120,506	....	47,609	....	2,246,210	....	1903
1904	1,505,548	....	299,333	....	21,178	....	85,741	....	41,956	....	1,953,756	....	1904
1905	1,574,428	$5,335,547	168,579	$498,194	41,972	$113,056	67,394	$215,875	42,125	$141,999	1,894,516	$6,304,671	1905
1906	1,475,961	5,620,875	348,875	1,046,951	254,812	730,235	109,141	382,109	30,834	116,222	2,219,044	7,896,392	1906
1907	1,295,113	5,915,227	561,973	1,799,290	184,173	547,757	85,190	337,384	43,424	181,718	2,169,873	8,781,366	1907
1908	1,651,770	7,524,251	644,133	1,733,379	218,513	554,197	68,827	274,089	23,730	99,867	2,606,973	10,185,783	1908
1909	1,705,302	7,610,550	464,873	1,114,839	120,712	274,110	56,556	231,029	48,034	207,624	2,305,477	9,438,151	1909
1910	1,450,267	7,774,390	554,322	1,764,055	254,218	773,409	114,026	559,666	40,221	214,802	2,413,054	11,086,322	1910
1911	1,320,705	8,552,512	1,021,356	4,493,966	303,823	1,215,692	120,704	752,283	45,378	363,024	2,820,966	16,198,833	1911
1912	1,904,258	10,776,987	1,303,365	3,410,928	638,528	1,600,444	170,384	791,023	52,594	310,847	4,060,129	16,890,229	1912
1913	1,964,379	9,136,616	1,402,916	3,687,446	267,654	623,424	77,377	271,078	34,167	140,914	3,746,914	13,859,478	1913
1914	2,201,574	12,482,110	997,823	3,600,075	662,478	2,260,614	157,792	735,219	48,165	281,924	4,067,832	19,719,942	1914
1915	1,922,296	11,907,202	1,870,373	5,619,436	484,408	1,356,469	126,570	588,903	85,694	458,000	4,489,341	19,930,010	1915
1916	2,119,442	13,147,994	1,753,546	6,446,168	715,238	2,434,627	265,184	1,430,143	66,179	364,496	4,919,589	23,823,428	1916
1917	2,484,881	29,058,778	2,298,466	15,120,419	877,713	5,375,713	193,708	1,634,600	67,552	660,868	5,922,320	51,850,017	1917
1918	2,618,559	25,313,837	2,418,212	16,142,604	1,366,859	8,756,598	216,572	2,068,784	57,367	596,000	6,677,569	52,877,823	1918
1919	1,265,543	17,143,017	1,657,434	14,982,542	1,348,462	9,450,772	230,229	2,809,310	90,533	1,131,662	4,592,201	45,552,714	1919
1920	1,475,780	19,851,816	1,613,434	9,751,845	1,022,708	4,712,575	192,311	1,579,963	91,276	1,154,013	4,395,509	37,050,212	1920
1921	1,758,794	16,539,177	440,471	1,938,263	247,606	990,424	109,783	649,480	48,319	352,699	2,604,699	20,470,043	1921
1922	2,075,397	19,719,158	1,657,556	7,709,011	562,496	2,369,396	174,312	949,312	31,604	258,799	4,501,428	31,006,027	1922
1923	1,878,330	17,727,572	2,455,136	12,337,580	527,145	2,542,759	163,752	957,439	38,977	344,078	5,063,340	33,909,428	1923
1924	1,449,724	14,840,946	2,613,068	13,191,793	1,027,183	4,931,172	182,207	1,312,989	33,741	304,809	5,305,923	34,581,689	1924
1925	1,065,290	15,243,243	2,105,240	11,473,271	1,065,395	4,701,847	164,199	1,702,243	50,774	682,235	4,450,898	33,802,839	1925
1926	2,157,087	21,328,739	3,338,349	17,987,527	902,443	4,518,929	202,527	1,700,563	52,476	544,247	6,652,882	46,080,005	1926
1927	1,320,563	16,880,670	1,414,756	8,638,551	507,641	2,761,638	252,629	2,307,569	70,438	853,100	3,566,072	31,441,534	1927
1928	1,944,061	18,902,050	2,785,464	18,512,649	991,504	564,567	297,886	2,140,685	51,195	505,017	6,070,110	45,624,968	1928
1929	1,693,050	19,388,299	2,570,506	15,551,647	860,876	4,659,754	172,070	1,302,887	73,740	769,869	5,370,242	41,672,456	1929
1930	848,787	11,172,954	3,150,652	12,773,894	596,000	2,162,306	329,988	3,011,505	63,560	764,254	4,988,987	29,884,813	1930
1931	1,695,782	16,161,532	2,978,512	10,226,769	536,909	1,726,203	170,208	1,119,332	51,124	462,800	5,432,535	29,696,636	1931
1932	2,104,727	10,803,982	2,116,573	6,368,695	821,128	2,301,408	149,351	606,798	68,709	368,522	5,260,488	20,449,405	1932
1933	2,182,371	14,649,771	2,183,443	10,498,358	658,245	3,028,584	161,633	884,276	41,006	345,310	5,226,698	29,406,294	1933
1934	2,626,002	17,687,617	3,822,602	15,349,445	735,055	2,651,538	235,560	1,197,000	51,367	155,230	7,470,586	37,040,830	1934
1935	823,175	7,216,754	3,254,528	13,767,517	852,730	3,414,160	188,918	1,263,479	36,475	348,024	5,155,826	26,009,934	1935
1936	2,482,555	19,648,482	4,589,270	18,430,508	1,106,983	4,094,532	218,232	1,453,566	57,908	452,125	8,454,948	44,079,213	1936
1937	2,101,154	21,590,206	3,619,298	18,151,343	729,114	3,507,933	135,078	1,096,905	69,394	682,031	6,654,038	45,028,418	1937
1938	2,523,123	19,663,910	3,222,104	12,350,571	786,859	2,848,266	216,732	1,342,715	42,726	341,788	6,791,544	36,547,250	1938
1939	1,971,338	18,560,539	2,509,519	12,656,697	626,412	2,905,286	103,156	708,013	28,036	280,036	5,239,211	35,110,571	1939
1940	953,381	9,402,841	2,908,025	15,770,772	860,539	4,312,766	284,130	2,122,330	22,303	219,742	5,028,378	31,828,451	1940
1941	1,164,888	15,952,391	4,636,649	32,593,271	710,507	4,844,060	356,213	3,595,982	38,246	480,998	6,906,503	57,466,702	1941
1942	912,006	13,804,764	2,818,650	22,565,374	942,789	7,178,696	372,537	4,442,108	43,127	686,567	5,089,109	48,677,509	1942
1943	1,982,175	30,381,755	2,322,057	18,701,467	882,578	6,755,829	158,734	1,937,981	50,965	802,162	5,396,509	58,579,194	1943
1944	1,580,757	24,254,327	2,087,322	16,924,966	985,725	7,565,526	187,053	2,278,938	36,939	584,787	4,877,796	51,608,544	1944
1945	1,173,356	18,260,328	2,239,282	18,201,352	688,485	5,312,578	195,860	2,078,066	41,709	676,640	4,338,692	44,528,964	1945
1946	1,065,898	22,880,873	2,057,121	24,685,452	617,155	7,120,923	193,061	3,231,992	37,874	748,321	3,971,109	58,667,561	1946
1947	1,876,239	45,390,823	1,723,617	32,269,419	500,211	8,983,297	148,715	3,522,434	53,684	1,131,912	4,302,466	91,297,885	1947
1948	1,635,463	44,994,233	1,304,044	31,617,066	774,661	16,345,475	241,799	6,278,595	54,645	1,459,245	4,010,612	100,694,614	1948
1949	967,626	25,504,967	2,682,330	42,921,708	499,226	7,572,386	192,352	4,004,944	50,007	1,258,463	4,391,541	81,262,468	1949
1950	1,153,508	33,845,862	1,095,534	25,663,330	777,779	15,212,302	191,501	5,131,834	54,321	1,550,183	3,272,643	81,403,511	1950
1951	772,463	24,603,107	1,559,748	32,505,086	719,487	10,925,359	345,158	8,715,457	87,612	2,488,346	3,484,468	79,237,355	1951
1952	1,279,748	35,703,226	1,172,419	22,056,404	955,439	15,360,732	193,656	4,369,818	55,842	1,471,104	3,657,104	78,961,284	1952
Aver.	1,348,723	$30,581,950	1,824,320	$26,554,625	740,078	10,115,440	204,789	$4,155,006	52,360	$1,217,116	4,170,294	$72,624,138	Aver.

NOTE: — Figures for last year are from "Pacific Fisherman's" compilation, and include, as far as possible, the pack from Freezership fish. Figures for previous years are from official U.A. data, and cover fish canned in Alaska only.

ALTHOUGH production of the Bristol Bay salmon fishery in 1952 was more than twice that of the preceding year, it was a grave disappointment to all who participated in it or are dependent upon it. With 1952 billed as a "big year" on the basis of the records of the past, the pack was crushingly short of expectations.

This condition was particularly acute on the Nushagak, where the run was very weak and the season closed early to provide escapement. Somewhat the same situation existed on the Ugashik.

As a result of the scant Nushagak run of 1952, following a full cycle or more of declining productivity, the U. S. Fish and Wildlife Service announced late in the year that the Nushagak would be closed entirely to fishing in 1953, and that this closure could be regarded merely as the first year of a program which would extend through an entire five-year cycle on that stream.

Bristol Bay Freezership Fleet Increases Sharply

Freezership operations on Bristol Bay increased sharply in 1952, with 18 vessels engaged in this trade. The number of fish frozen by the floaters was exactly double that of the year before—but the run was also much greater. In other words, the *percentage* of the Bristol Bay catch taken by the freezerships did not vary greatly from that of the year before, despite the substantial increase in the fleet.

One of the freezerships, the *Sundown*, owned by the Luketa family, was lost with all her cargo in Unimak Pass on her way south at the end of the season.

Quality Always

FOR many years the canned salmon industry has utilized its resources to give consumers a better product constantly improving production and distribution methods.

Today, the industry offers with pride a consistently fine basic food that is rich in nutritional value, appetite appeal and adaptability to modern mealtime needs.

A one-pound can of salmon contains enough health-building goodness to feed a family of four a delicious, satisfying meal. High in protein content, it boasts many other essential food requirements also. *Canned salmon is actually an economy food!*

All the facilities of Pacific American Fisheries are pledged to continued development of the industry.

PACIFIC AMERICAN FISHERIES, Inc.
South Bellingham, Washington
"Quality Always"

Sales Subsidiary: DEMING & GOULD COMPANY, South Bellingham

1952-Bristol Bay Freezerships Canned Salmon Pack-1952

	VESSEL	RED			PINK	CHUM	COHO	KING	GRAND TOTAL (full cases)
		Talls	Halves (8 doz.)	Total	Talls	Talls & Halves (full cases)	Talls	Talls	
1	Alaska Reefer (1)	10,157	...	10,157	...	99	...	...	10,256
2	Alert (2)	2,320	...	2,320	...	24	...	...	2,344
3	Arctic Maid (1)	10,125	...	10,125	...	...	...	...	10,125
4	California (3)	2,617	...	2,617	...	104	...	...	2,721
5	K - J (4)	152	...	152	...	...	...	...	152
6	Marsha Ann (3)	2,660	...	2,660	...	41	...	...	2,701
7	Michelle Eve (5)	1,635	...	1,635	...	5	...	...	1,640
8	North Star (6)	12,845	3,694	16,539	...	(12) 628	...	...	17,167
9	Pacific Queen (6)	10,139	77	10,216	...	87	...	...	10,303
10	Pacific Reefer (1)	7,802	...	7,802	7	95	...	4	7,908
11	Reefer II (7)	(13) 2,908	...	2,908	...	...	...	...	2,908
12	Reefer King (8)	3,597	710	4,307	(14) 970	553	64	...	5,894
13	Scarlet Queen (9)	6,651	...	6,651	10	167	...	...	6,828
14	Sea Lark (10)	8,984	...	8,984	4	200	...	4	9,192
15	Sundown (4) *	73	...	73	...	...	...	...	73
16	Toni B (11)	10,582	...	10,582	12	166	4	15	10,779
17	Washington Star (1)	2,240	...	2,240	...	14	...	...	2,254
18	Western Ace (3)	9,773	...	9,773	...	301	...	...	10,074
	TOTAL	105,260	4,481	109,741	1,003	2,484	68	23	113,319

NOTES: - Fish noted in this table were canned in the following plants:
(1) Washington Fish & Oyster Co., Seattle.
(2) Dressel-Collins Fish Co., Seattle.
(3) American Packing Co., Anacortes. (4) Haines Oyster Co, Seattle.
(5) Ouzinkie Packing Co., Ouzinkie, Alaska. (6) Various, Puget Sound.
* The "Sundown" was lost in Unimak Pass with the bulk of its catch (56,339 salmon, equivalent to about 4,400 cases), but the pack shown was made from fish shipped earlier.
(8) Washington Fish & Oyster Co., Port Williams, and Farwest Fishermen, Inc., Anacortes.
(9) San Juan Fishing & Packing Co., Seattle.
(10) New England Fish Co., Everett, and Peninsula Packers, floating.
(11) Peninsula Packers, floating, and Dressel-Collins Fish Co., Seattle.
(12) Includes 222 full cases Halves.
(13) All 4-lb. Flats.
(14) 502 full cases Halves.
(7) Friday Harbor Canning Co.

WESTERN ALASKA CANNED SALMON PACKS

BRISTOL BAY AND YUKON (Cases)						YEAR	ALASKA PENINSULA, NORTH SIDE (Cases)						GRAND TOTAL
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL	
1,588,008	....	24,559	1,456	9,197	1,623,220	1933	26,665	....	1,490	....	284	28,439	1,651,659
1,726,769	1,959	32,222	1,219	8,580	1,770,759	1934	87,379	....	974	....	217	88,570	1,859,329
231,014	....	6,995	223	660	238,892	1935	34,920	4	2,862	....	175	37,961	276,853
1,388,776	30,773	25,045	1,571	4,092	1,450,257	1936	38,930	293	1,511	....	214	40,948	1,491,205
1,421,369	....	29,286	138	6,897	1,457,690	1937	55,315	1	6,170	....	234	61,720	1,519,410
1,772,885	....	54,551	345	5,446	1,833,227	1938	73,942	....	5,063	....	1,053	80,058	1,913,285
1,059,181	....	88,272	....	5,038	1,152,491	1939	56,310	2	6,478	....	465	63,255	1,215,746
402,899	16,081	30,624	1,445	3,504	454,553	1940	56,158	....	4,914	....	79	61,151	515,704
577,024	9	50,901	3,436	5,785	637,155	1941	36,366	95	4,953	....	179	41,593	678,748
438,053	8,564	16,749	2,638	7,001	473,005	1942	....	....	....	....	....	....	473,005
1,275,212	....	37,757	180	11,826	1,324,975	1943	39,330	54	3,680	....	56	43,120	1,368,095
954,694	3,911	31,838	2,408	5,420	998,271	1944	31,849	130	12,855	....	21	44,855	1,043,126
576,318	....	66,888	3,105	9,478	665,789	1945	32,342	127	25,007	....	22	57,498	723,287
626,240	4,073	36,436	2,663	10,768	682,180	1946	27,821	....	1,798	....	167	29,786	711,966
1,335,031	....	35,802	1,866	13,737	1,386,436	1947	25,675	....	6,047	8	71	31,801	1,418,237
1,212,233	3,148	64,167	4,140	13,576	1,297,264	1948	65,961	101	17,474	1,220	310	85,066	1,382,330
525,309	....	33,345	2,214	13,795	574,663	1949	10,612	....	2,954	2,349	179	16,094	590,757
577,158	1,607	16,588	2,840	13,217	611,410	1950	10,335	2	18,294	4,098	158	32,887	654,162*
319,709	....	15,254	3,357	14,753	353,073	1951	29,322	10,337	11,595	2,561	370	54,185	407,258
309,936	....	15,744	4,366	15,086**	345,132	1951	29,656	75	9,777	3,637	242	43,387	388,519
712,503	1,178	30,459	373	11,087	755,600	1952	12,769	....	7,386	6,032	123	26,310	781,910
810,663	1,391	36,902	2,415	11,799	864,172	Aver.	28,635	49	10,527	1,734	135	41,080	906,239

"Average" figures are for the last ten years.
** Includes 10,425 cases of Kings packed in Kotzebue-Yukon-Kuskokwim district.
* Includes 9,865 cases of Kings packed in Kotzebue-Yukon-Kuskokwim district.

BRISTOL BAY RED SALMON PACKS

(Based on preliminary data, not identical with final figures shown in some other tabulations.)

YEAR	NUSHAGAK	NAKNEK-KVICHAK	EGEGIK	UGASHIK	TOTAL	YEAR
1940	166,208	26,786	16,435	.....	450,229	1940
1941	172,835	417,564	29,894	3,555	623,848	1941
1942	196,671	222,281	.....	48,239	467,191	1942
1943	282,100	958,144	.....	78,110	1,318,354	1943
1944	270,034	588,414	44,113	80,241	982,802	1944
1945	222,738	351,638	.....	67,577	641,953	1945
1946	151,216	424,904	22,671	48,534	647,325	1946
1947	220,181	1,015,246	73,422	63,408	1,372,369	1947
1948	262,581	629,407	96,488	127,692	1,316,168	1948
1949	79,173	346,287	84,294	53,266	563,020	1949
1950	115,019	345,587	59,992	65,957	586,555	1950
1951	31,143	239,289	43,590	25,090	339,112	1951
1952	81,720	600,009	52,277	21,594	755,600	1952

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For over 50 years the Bumble Bee label has been a symbol of quality in seafoods.

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The fact that each succeeding day more consumers reach for Bumble Bee Seafoods on grocers' shelves all over America is proof of the effectiveness of this team.

COLUMBIA RIVER PACKERS ASSN., INC.

Astoria, Oregon

Packers of CANNED TUNA, SALMON, CRAB MEAT, SHAD ROE, KIPPERED STURGEON
FROZEN PACIFIC OCEAN PERCH, SOLE, ROCKFISH, SALMON, HALIBUT

SALMON
CENTRAL ALASKA

EXCELLENT runs of Pinks and Chums in the Kodiak Island area, and of Sockeyes on Copper River, provided the favorable factors of 1952 in Central Alaska; but Prince William Sound proved dismally disappointing.

The Copper River's surprising—and all-time record—Sockeye yield started the Alaska salmon season of 1952 off brightly. Few fish had been expected for the spring season and operations were closely consolidated. The early part of May was lost in price wrangling, but it is doubtful if this disagreement cost much in the way of Sockeyes, although undoubtedly a substantial part of the King run was lost.

Critical Competition Continues on Inlet

The critical competitive situation continued on Cook Inlet in 1952, with fish to pack an estimated 61,000 cases carried from the Inlet for canning elsewhere.

Official data for the Inlet showed a breakdown of the 1952 catch by gear as follows:

Reds—Traps, 17%; Driftnets, 66%; Setnets, 16%.

Kings — Traps, 15.7%; Driftnets, 43%; Setnets, 41%.

The number of drift gillnets operating on the Inlet in 1952 was 437, as compared with 600 the year before and 80 in 1948.

CENTRAL ALASKA CANNED SALMON PACKS

ALASKA PENINSULA, SOUTH SIDE (Cases)						YEAR	CHIGNIK (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
152,073	156,556	109,608	17,082	3,130	438,449	1933	55,541	16,369	11,188	4,051	249	87,398
173,136	312,762	182,666	25,418	4,639	698,621	1934	122,326	28,406	13,417	2,476	157	166,782
74,412	266,144	175,340	11,297	3,741	530,934	1935	60,808	19,504	17,027	1,611	127	99,077
276,548	512,740	199,222	27,226	3,678	1,019,414	1936	100,499	35,917	10,278	4,643	108	151,455
92,639	451,139	117,147	6,836	2,262	670,023	1937	52,727	57,620	10,193	1,626	154	122,320
57,439	367,827	128,574	21,650	1,655	577,145	1938	35,117	12,071	6,792	2,254	148	56,412
149,046	292,203	120,901	9,835	4,483	576,468	1939	142,770	13,744	6,874	728	377	164,493
88,690	356,969	209,749	18,063	3,330	676,801	1940	27,772	4,083	2,349	20	---	34,224
97,695	233,438	163,058	17,298	3,008	514,497	1941	59,373	16,373	15,345	2,322	316	93,729
56,886	291,392	117,532	10,437	843	477,090	1942	56,977	22,962	11,853	1,093	378	93,263
177,000	167,024	70,727	6,657	1,934	423,342	1943	110,086	4,265	4,638	1,924	290	121,203
40,585	123,988	82,560	21,108	819	269,060	1944	47,448	29,283	6,221	1,223	442	84,617
58,984	140,319	73,752	9,923	1,765	284,743	1945	18,666	18,381	11,582	638	222	49,489
50,808	89,164	88,544	12,122	688	241,326	1946	70,817	39,544	22,049	695	305	133,410
83,407	115,916	81,921	4,343	456	286,043	1947	146,788	23,640	5,417	512	111	176,468
23,916	66,743	82,494	2,689	151	175,993	1948	33,574	47,393	31,348	79	79	112,473
47,751	70,866	39,863	1,526	723	160,729	1949	54,146	3,976	11,210	512	129	69,973
135,595	88,452	49,703	5,315	803	279,868	1950	31,644	28,737	8,885	1,135	127	70,528
15,344	116,730	43,007	3,440	183	178,704	1951	25,857	18,576	16,135	719	231	61,518
88,162	38,234	118,313	3,946	204	248,859	1952	14,826	23,354	50,145	73	20	88,418
62,153	76,205	66,676	3,383	413	208,830	Aver.	32,009	24,407	23,544	504	117	80,582

KODIAK AREA (Cases)						YEAR	COOK INLET (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
108,787	331,000	50,134	8,222	283	498,426	1933	98,510	5,591	5,277	16,419	14,710	140,867
151,924	420,684	73,588	9,151	344	655,691	1934	154,697	48,186	9,141	25,665	19,148	256,837
119,720	534,083	42,130	6,753	350	703,036	1935	104,694	22,506	14,400	14,977	18,863	175,440
202,983	394,025	39,248	17,548	620	654,424	1936	188,063	51,350	23,780	31,345	19,723	314,261
120,674	769,055	29,353	14,179	357	933,618	1937	109,471	21,528	12,976	14,005	24,674	182,654
142,112	450,098	69,792	14,716	316	677,034	1938	170,725	54,894	16,260	32,745	16,060	290,684
115,604	603,492	62,185	9,442	651	791,374	1939	183,304	15,570	20,726	13,076	16,554	249,230
93,751	443,154	60,332	14,246	313	611,796	1940	129,952	122,437	26,695	46,015	15,995	341,093
121,725	508,306	57,368	22,854	638	710,891	1941	90,885	38,235	24,706	31,105	27,448	212,379
83,340	313,711	76,563	10,751	363	484,728	1942	98,418	55,722	40,110	61,734	28,617	284,604
129,105	555,209	41,766	5,682	308	730,070	1943	102,746	60,540	26,292	23,447	30,963	243,988
142,212	335,683	56,035	5,623	183	539,736	1944	156,799	96,694	23,311	25,442	25,668	327,914
154,513	491,346	64,957	5,640	521	716,977	1945	118,849	54,370	28,302	28,718	22,420	252,659
65,810	541,334	37,817	3,982	34	648,977	1946	105,065	60,101	31,593	35,835	17,191	249,785
85,805	494,211	23,133	6,752	27	609,928	1947	106,180	30,073	21,183	34,430	30,718	222,584
98,030	303,564	93,918	4,046	189	499,747	1948	133,828	75,678	38,086	29,462	32,688	309,742
69,861	208,537	63,632	5,055	803	347,888	1949	165,588	19,139	21,844	26,783	31,234	264,588
64,463	266,694	73,846	5,786	408	411,197	1950	207,032	62,528	52,572	63,565	34,247	419,944
81,117	126,238	89,926	8,842	5,996	312,119	1951	171,030	24,296	21,834	27,707	59,973	304,890
82,274	268,789	124,642	3,927	1,964	481,596	1952	95,886	116,043	31,516	18,749	22,904	285,098
79,149	234,764	89,193	5,531	1,872	410,509	Aver.	154,673	59,537	33,180	33,253	36,209	316,852

PRINCE WILLIAM SOUND and RESURRECTION BAY (Cases)						YEAR	COPPER and BERING RIVER AREA (Cases)				REGIONAL
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Cohoes	Kings	TOTAL	GRAND TOTAL
12,786	194,646	31,672	8,317	723	248,144	1933	56,787	11,232	4,691	72,710	1,485,994
14,549	389,676	34,421	13,661	715	453,022	1934	92,838	158	3,469	96,465	2,327,418
16,096	201,756	53,226	3,447	621	275,146	1935	8,453	9,385	760	18,598	1,802,231
13,440	609,537	23,660	5,245	431	652,313	1936	75,296	15	2,513	77,824	2,869,691
8,492	182,762	21,941	6,651	329	220,175	1937	78,238	5,463	3,868	87,569	2,216,359
10,615	461,114	31,218	6,846	251	510,044	1938	65,777	155	2,514	68,446	2,179,765
12,390	129,491	28,756	3,858	257	174,752	1939	52,285	1,116	2,192	55,593	2,011,910
7,065	521,745	54,001	10,257	182	593,250	1940	37,847	30,521	1,337	69,705	2,326,869
7,083	217,007	73,776	6,430	100	304,396	1941	36,868	83,142	3,067	123,077	1,958,969
13,289	366,965	82,633	13,703	449	477,039	1942	47,849	84,322	5,262	137,433	1,954,157
9,285	511,818	30,620	8,237	2,595	562,555	1943	57,418	21,837	4,893	84,148	2,165,306
12,741	416,848	118,159	7,902	158	555,808	1944	62,780	34,949	2,517	100,246	1,877,381
17,382	493,482	154,080	4,941	102	669,987	1945	70,744	41,103	6,037	117,884	2,091,739
10,432	317,329	76,003	16,037	408	420,209	1946	45,645	25,821	7,145	78,611	1,772,318
17,955	380,017	65,018	7,270	180	470,440	1947	30,717	22,231	3,596	56,544	1,822,007
19,115	123,411	47,008	5,048	74	194,656	1948	13,536	28,405	1,237	43,180	1,335,791
8,423	275,830	83,195	13,016	167	380,631	1949	46,404	15,986	1,964	64,354	1,288,163
7,179	111,838	57,464	12,441	88	189,010	1950	70,592	18,997	4,517	94,106	1,184,785
66,871	47,249	56,680	30,555	5,195	206,550	1951	2,337	1,499	70	3,906	1,067,687
7,784	119,953	66,864	5,882	5	200,488	1952	103,533	33,486	9,337	146,356	1,450,815
21,874	135,656	62,242	13,388	1,106	234,267	Aver.	47,280	19,675	3,425	70,380	1,265,448

NOTE: — In Copper and Bering River Area, negligible quantities of Pinks and Chums in some years have been combined with Cohoes.
"Average" figures are for the last 5 years.

1952-RECAPITULATION OF ALASKA CANNED SALMON PACK-1952

DISTRICT	RED or SOCKEYE				PINK			CHUM				Medium RED or COHO			KING or CHINOOK			GRAND TOTAL (Full Cases)
	1-lb. Talls	1-lb.and 4-lb. Flats	½-lb.Flats (8-doz.)	TOTAL	1-lb. Talls etc.	½-lb.Flats (8 doz.)	TOTAL	1-lb. Talls	1-lb.& 4-lb. Flats	½-lb. Flats (8 doz)	TOTAL	1-lb. Talls & Flats,etc.	½-lb.Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz)	TOTAL	
Western Alaska	805,678	13,064	23,253	841,995	1,787	502	2,289	39,007	. . .	2,356	41,363	6,725	932	7,657	10,106	9,207	19,313	912,617
Central Alaska	265,280	13,656	90,063	368,999	543,648	32,199	575,847	370,964	1,878	9,372	382,214	63,101	1,777	64,878	19,275	14,834	34,109	1,426,047
Southeast Alaska	44,500	2,820	21,434	68,754	526,065	68,218	594,283	508,614	1,310	21,938	531,862	(a) 97,464	23,657	121,121	1,654	766	2,420	1,318,440
TOTAL	1,115,458	29,540	134,750	1,279,748	1,071,500	100,919	1,172,419	918,585	3,188	33,666	955,439	167,290	26,366	193,656	31,035	24,807	55,842	3,657,104

NOTE: — This table includes 4-lb. Flats (with Talls unless otherwise noted) as follows: Western Alaska — 2,908 cases Reds; Central Alaska — 558 cases Reds, 3,535 Pinks, 1,376 Chums, 9,331 Cohoes and 8 Kings, total 14,808 cases; Southeast Alaska — 2,820 cases Reds, 304 Pinks, 1,310 Chums, 765 Cohoes and 175 Kings, total 5,374 cases.

The figures for 1-lb Flats are: Western Alaska, 10,156 cases Reds and 3 Kings; Central Alaska, 13,098 cases Reds, 502 Chums and 25 Kings, total 13,625 cases.

(a) Includes 31 cases Steelhead Talls.

1952-CANNED SALMON PACK OF PACIFIC AMERICAN FISHERIES, INC.-1952

DISTRICT AND CANNERY LOCATION	RED or SOCKEYE				PINK			CHUM				COHO				KING or CHINOOK			GRAND TOTAL (full cases)
	1-lb. Talls	1-lb. Flats	½-lb.Flats (8 doz.)	Total	1-lb. Talls	½-lb. Flats (8 doz.)	Total	1-lb. Talls	1-& 4-lb Flats	½-lb. Flats (8 doz.)	Total	1-lb. Talls	1-& 4-lb. Flats	½-lb. Flats (8 doz.)	Total	1-lb. Talls	½-lb. Flats (8 doz.)	Total	
WESTERN ALASKA																			
Dillingham	5,244	...	3,994	9,238	205	...	205	4,046	...	...	4,046	118	...	...	118	284	251	535	14,142
Naknek	27,104	5,117	...	32,221	55	...	55	667	...	...	667	...	...	...	...	102	...	102	33,045
Port Moller	12,348	...	...	12,348	...	...	...	7,377	...	...	7,377	6,031	...	...	6,031	123	...	123	25,879
"Neva" (floating)	17,740	...	...	17,740	28	...	28	264	...	...	264	...	...	...	...	60	...	60	18,092
TOTAL Western Alaska	62,436	5,117	3,994	71,547	288	...	288	12,354	...	...	12,354	6,149	...	...	6,149	569	251	820	91,158
CENTRAL ALASKA																			
King Cove	1,609	10,172	4,728	16,509	5,533	5,010	10,543	26,453	502	2,166	29,121	302	...	...	302	10	...	10	56,485
Squaw Harbor	870	...	3,155	4,025	5,653	1,299	6,952	5,782	...	2,221	8,003	269	...	...	269	7	...	7	19,256
Chignik (a)	61	...	...	61	1	...	1	1	...	...	1	...	...	...	...	1	...	1	64
Alitak	6,451	...	2,499	8,950	15,229	476	15,705	5,085	...	...	5,085	2	...	...	2	5	...	5	29,747
"Neva" (floating) Kodiak Isle	1,309	...	...	1,309	14,202	...	14,202	1,900	...	...	1,900	68	...	...	68	1	...	1	17,480
"Neva" (floating) S. Peninsula	4,186	...	...	4,186	462	...	462	4,747	...	...	4,747	...	...	...	...	122	...	122	9,517
Snug Harbor (a)	3,892	1,451	...	5,343	5,956	...	5,956	289	...	...	289	1,290	...	...	1,290	303	...	303	13,181
"Neva" (floating) Pr. Wm. Sound	84	...	...	84	1,513	...	1,513	243	...	...	243	42	...	...	42	...	...	...	1,882
TOTAL Central Alaska	18,462	11,623	10,382	40,467	48,549	6,785	55,334	44,500	502	4,387	49,389	1,973	...	...	1,973	449	...	449	147,612
SOUTHEAST ALASKA																			
Petersburg	(b)- 187	...	835	648	5,453	12,154	17,607	13,896	...	...	13,896	(b) -4	...	1,655	1,651	...	23	23	33,825
Pillar Bay	...	...	213	213	5,146	...	5,146	2,753	...	...	2,753	...	...	438	438	8	12	20	8,570
Kasaan	2,560	...	...	2,560	37,767	...	37,767	27,378	...	...	27,378	2,747	...	...	2,747	...	...	...	70,452
"Neva" (floating)	27	...	...	27	6,178	...	6,178	2,072	...	...	2,072	200	...	...	200	1	...	1	8,478
TOTAL Southeast Alaska (c)	2,400	...	1,048	3,448	54,544	12,154	66,698	46,099	...	...	46,099	2,943	...	2,093	5,036	9	35	44	121,325
TOTAL ALASKA	83,298	16,740	15,424	115,462	103,381	18,939	122,320	102,953	502	4,387	107,842	11,065	...	2,093	13,158	1,027	286	1,313	360,095
PUGET SOUND																			
Bellingham	...	...	944	944	...	1	1	8,938	(d)8,951	20,713	38,602	2	(d) 1,033	375	1,410	2	13	15	40,972
GRAND TOTAL	83,298	16,740	16,368	116,406	103,381	18,940	122,321	111,891	9,453	25,100	146,444	11,067	1,033	2,468	14,568	1,029	299	1,328	401,067

NOTES: — (a) Some of Pacific American Fisheries' packs were made through joint operations in canneries of other companies, as follows: Chignik, in plant of Alaska Packers Association; Snug Harbor, in plant of Snug Harbor Packing Co. Joint operations conducted in Pacific American canneries were: Dillingham, with Bristol Bay Packing Co.; Naknek, with Libby, McNeill & Libby; Squaw Harbor, with Alaska Pacific Salmon Co.; Alitak, with Alaska Packers Association and Libby, McNeill & Libby; Petersburg and Pillar Bay (all canned in Petersburg plant) with Fidalgo Island Packing Co. In all such cases, only Pacific American Fisheries' share of the joint output is tabulated above.

(b) "Minus" figures in Petersburg pack (subtracted from totals) result from a complication in joint operation at that point.

(c) Not including purchased share of Excursion Inlet pack, listed in Southeast Alaska table. (d) 4-lb. Flats.

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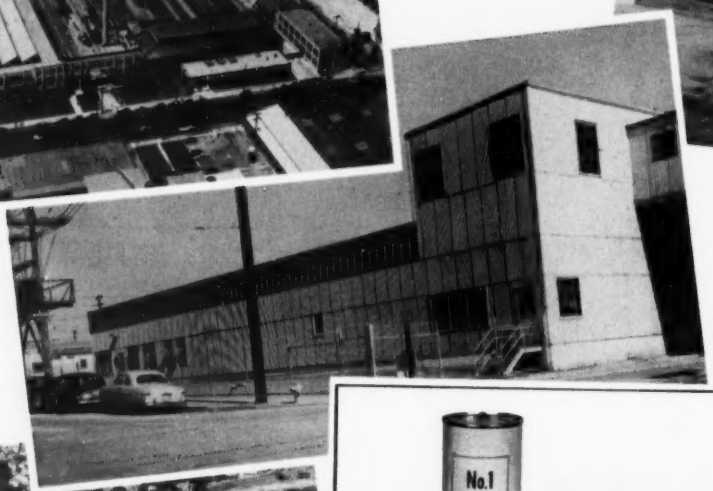
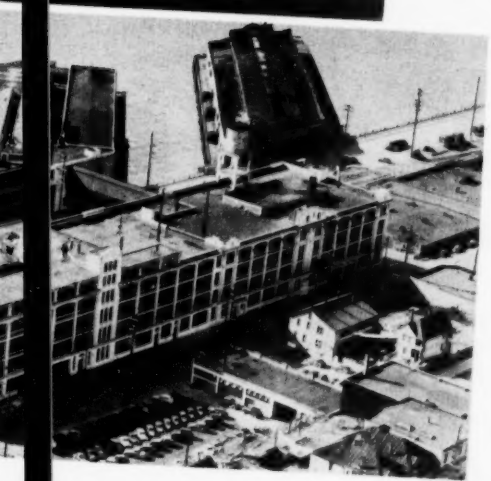


he skilled workers
b make it possible!



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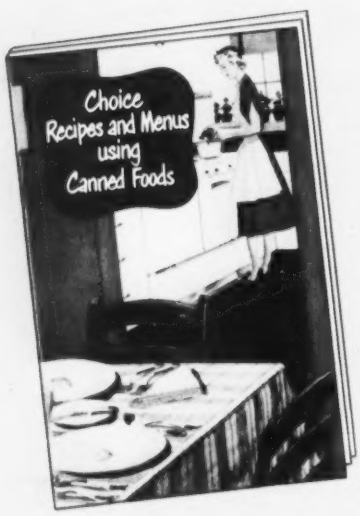

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SALMON
CENTRAL ALASKA

Kodiak Island Pink Run Proves Excellent

Kodiak's good run began in the last week in July and was over by August 20, but in those three weeks it provided a fine yield.

It is worthy of note that the record catch on the Copper River was made with a fleet of gillnetters numbering 160 boats less than in 1951.

Operations on Copper River Cohoes during the special fall season served to add approximately 24,000 cases to the pack of this species.

Packers of the Prince William Sound district provided for the initiation in 1952 of a salmon research program, to be carried out as a project of the Fisheries Research Institute of the University of Washington.

Realistic appraisal of the salmon prospects for Prince William Sound in 1952 led to adoption of consolidation programs generally by the packing companies, with resulting savings in cost which cushioned the shock of adverse conditions, which developed much as had been anticipated.

One of the Prince William Sound canneries, Ellamar Packing Co., was lost by fire shortly before the season.

Pink prospects on Prince William Sound are rated fair for 1953.

Pacific Canned Salmon Packs and Values

Packs reduced to basis of full cases of 48 lbs. net. Values calculated from best data available.

Year	Alaska		Washington		Oregon		California		U. S. Total		British Columbia		Grand Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
		$		$		$		$		$		$		$
1939	5,239,211	35,110,571	478,246	3,944,000	251,070	3,640,898	...	...	5,971,527	42,695,469	1,539,070	10,449,945	7,510,597	53,145,414
1940	5,028,378	31,828,451	222,808	2,825,000	297,716	4,129,220	...	...	5,548,902	38,782,681	1,467,227	11,427,923	7,016,129	50,209,908
1941	6,906,503	57,466,702	491,311	6,162,000	399,840	5,925,444	1,125	13,500	7,798,779	69,567,646	2,248,870	18,406,545	10,047,649	87,974,191
1942	5,089,109	48,677,509	366,065	6,909,000	397,331	6,890,162	...	...	5,852,515	62,476,671	1,811,560	20,050,238	7,664,075	82,526,909
1943	5,396,509	58,579,194	149,175	2,309,000	130,707	2,857,246	767	16,000	5,677,158	63,761,440	1,258,221	11,673,469	6,935,379	75,434,909
1944	4,877,796	51,606,544	81,490	1,774,000	159,783	3,445,244	864	17,660	5,119,943	56,843,448	1,097,558	11,479,093	6,217,521	68,322,547
1945	4,338,692	44,528,964	414,258	4,845,000	155,292	3,287,812	2,755	38,000	4,913,335	52,699,776	1,739,311	18,409,962	6,652,646	71,109,738
1946	3,971,109	58,667,561	385,437	13,020,000	206,563	7,165,645	5,034	153,000	4,568,149	79,006,206	1,348,138	17,532,462	5,916,287	96,538,668
1947	4,302,466	91,297,885	957,429	21,420,000	338,852	11,133,690	13,917	513,000	5,612,664	124,364,575	1,505,157	24,900,009	7,117,379	149,264,575
1948	4,014,891	96,528,730	484,102	12,685,858	314,556	10,956,513	11,417	366,095	4,824,966	120,537,196	1,308,137	26,579,000	6,133,103	147,116,196
1949	4,391,591	81,263,168	973,740	17,481,282	158,472	4,665,290	1,113	21,240	5,524,916	103,430,980	1,436,464	27,654,489	6,961,380	131,085,469
1950	3,272,643	81,403,511	670,341	18,285,000	176,063	6,193,000	...	...	4,119,047	105,881,511	1,482,560	30,155,177	5,602,058½	138,885,502
1951	3,631,918	84,649,330	906,252	21,357,974	175,091	6,631,198	...	...	4,713,261	112,638,502	1,955,475	46,261,080	6,668,736	158,899,582
1952	3,657,104	78,961,284	657,125	15,881,930	140,090	4,733,302	703	20,292	4,455,022	99,636,808	1,286,468	27,751,435	5,741,490	127,388,243

DATA ON BRISTOL BAY OPERATIONS

YEAR	Number of Canneries Operated	Canning Lines in Operation	Number of Other Operations	Total Boats Fishing Salmon	Total Set Nets Fishing	Total Fathoms of Gear Operated	Number of Salmon Caught	Canned Salmon Pack (full cases)	Number of Salmon Used for Other Purposes than Canning (or Shipped Uncanned)	YEAR
1930	25	114	4	868	113	168,975	4,405,378	405,892	62,334	1930
1935	8	15½	3	181	169	35,600	3,116,493	245,047	75,140	1935
1936	23	91	8	1,102	410	170,900	21,051,695	1,450,856	164,996	1936
1937	22	83	7	1,086	313	166,750	21,282,098	1,459,450	107,068	1937
1938	17	67	...	1,006	189	160,350	25,295,927	1,834,436	(None)	1938
1939	22	96	2	1,219	268	196,250	14,300,806	1,154,921	7,644	1939
1940	8	36	11	503	233	87,100	5,318,481	446,513	136,507	1940
1941	16	50	3	791	225	129,900	6,958,140	642,977	30,472	1941
1942	6	12	...	224	65	36,850	6,732,502	469,624	(None)	1942
1943	11	33	...	633	158	102,850	17,749,837	1,320,286	(None)	1943
1944	12	35	1	655	187	106,780	11,957,230	982,802	8,840	1944
1945	8	17	7	316	207	58,250	7,978,607	644,072	68,546	1945
1946	16	42	11	777	215	126,150	8,406,905	682,180	175,951	1946
1947	17	49	7	928	340	142,064	18,937,386	1,376,722	130,655	1947
1948	20	59	2	1,053	403	178,730	15,156,876	1,316,168	66,492	1948
1949	19	32	8	731	467	132,115	6,805,568	563,020	202,415	1949
1950	13	26	17	520	516	102,095	7,402,764	586,555	364,122	1950
1951	16	28½	20	717*	504	119,120	4,615,607	342,075	672,740	1951
1952	21	46½	17	1,118**	463	187,575	11,464,559	758,809	1,584,839	1952

NOTE: — Data in this table compiled by U.S. Fish & Wildlife Service. Figures for boats and gear include those used in connection with salteries and freezers. The data are for the Bristol Bay area, including the Nushagak, Kvichak, Naknek, Egegik and Ugashik sections, but NOT the Yukon-Kuskokwim, Port Heiden, Herendeen Bay nor Port Moller districts.

* 631 sailboats and 86 power boats in 1951.
** 895 power boats and 223 sailboats in 1952.

RED SALMON PACKS ON BRISTOL BAY

YEAR	FIRST WEEK		SECOND WEEK		THIRD WEEK		FOURTH WEEK		TO CLOSE	TOTAL	YEAR
1940	(July 6)	221,687	(July 13)	139,853	(July 20)	33,848	(July 28)	4,606	...	399,994	1940
1941	(July 5)	204,929	(July 12)	206,049	(July 19)	127,573	(July 28)	31,316	...	569,867	1941
1942	(July 4)	149,175	(July 11)	142,145	(July 18)	93,174	(July 25)	44,323	7,357	436,174	1942
1943	(July 3)	284,635	(July 10)	449,076	(July 17)	272,074	(July 24)	242,122	27,174	1,275,081	1943
1944	(July 8)	431,421	(July 15)	347,149	(July 22)	116,514	(July 29)	18,045	...	944,129	1944
1945	(July 7)	236,413	(July 14)	233,332	(July 21)	84,681	(July 28)	15,405	...	569,831	1945
1946	(July 6)	241,948	(July 13)	241,405	(July 20)	88,520	(July 27)	30,831	...	602,704	1946
1947	(July 5)	641,401	(July 12)	376,575	(July 19)	242,854	(July 26)	70,975	3,226	1,335,031	1947
1948	(July 3)	482,252	(July 10)	464,488	(July 17)	169,806	(July 24)	112,111	7,680	1,236,226	1948
1949	(July 2)	260,145	(July 9)	142,637	(July 16)	86,865	(July 23)	30,675	3,581	523,903	1949
1950	(July 1)	93,006	(July 8)	370,340	(July 15)	89,070	(July 22)	10,832	411	563,659	1950
1951	(June 30)	59,185	(July 7)	127,553	(July 14)	73,692	(July 21)	59,143	...	319,573	1951
1952	(June 28)	92,073	(July 5)	228,069	(July 12)	256,014	(July 19)	119,729	21,618	712,503	1952

Compiled from U.S. Fish and Wildlife Service statistics.

Figures in first column of table are for the total pack (in full cases of 48 lbs. net) to dates shown; those following show weekly packs.

Oceanic Sales Company

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ALASKA
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COLUMBIA RIVER
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Down South
Seafed
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Cohoe
Redman
Salad
Western Star

Chinook
Springkist

Chum
Tomah
Overland
Ben Hur
Tennis

Crab Meat
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Tuna
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In the Salmon Industry

1952-CENTRAL ALASKA CANNED SALMON PACK-1952

	COMPANY	CANNERY LOCATION	RED OR SOCKEYE			PINK			CHUM			COHO			KING OR CHINOOK			GRAND TOTAL (full cases)	
			1 & 4 lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1 & 4 lb Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1 & 4 lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL	1-lb. Talls & Flats	½-lb. Flats (8 doz.)	TOTAL		
1	Alaska Pacific Salmon Co.	Sand Point	1,650	7,720	9,370	5,314	2,236	7,550	11,626	...	11,626	1,465	37	1,502	8	...	8	30,056	1
		Chignik	5,894	1,950	7,844	14,207	...	14,207	18,886	...	18,886	28	...	28	17	...	17	40,982	
2	Alaska Packers Assn.	Alitak (1)	2,917	...	2,917	4,793	...	4,793	571	...	571	...	...	....	...	...	...	8,281	2
		Karluk (1)	8,045	...	8,045	20,183	...	20,183	7,398	...	7,398	150	...	150	56	...	56	35,832	
3	Alaska Shellfish, Inc.	Seldovia	(a) 558	1,823	2,381	(a)3,535	553	4,088	(a)11,376	706	2,082	(a) 904	18	922	(a) 8	571	579	10,052	3
4	Alaska Year Round Canneries Co. & General Fish Co., Inc.	Seldovia, etc.	8,254	886	9,140	14,075	...	14,075	4,581	...	4,581	1,646	...	1,646	2,812	...	2,812	32,254	4
5	Alaskan Fisheries, Inc.	Valdez	...	...	...	4,391	...	4,391	4,767	...	4,767	85	...	85	...	...	...	9,243	5
6	Aurora Packing Co.	Big Point (Cordova)	...	100	100	...	...	...	...	...	...	...	...	...	...	...	.....	100	6
7	Joe Balestrieri & Co.	Cordova*	...	2,020	2,020	...	...	...	...	...	...	...	...	...	...	260	260	2,280	7
8	Berman Packing Co.	Ninilchik	...	2,119	2,119	...	1,066	1,066	...	190	190	...	310	310	...	632	632	4,317	8
9	Chignik Fisheries Co.	Chignik	5,860	...	5,860	8,615	...	8,615	28,332	...	28,332	66	...	66	2	...	2	42,875	9
10	Cook Inlet Packing Co.	Seldovia	2,915	...	2,915	6,681	...	6,681	...	...	...	774	...	774	764	...	764	11,134	10
11	Copper River Co-OP Co., Inc.	Copper River & Eshamy Bay	...	8,841	8,841	...	5,029	5,029	...	361	361	...	72	72	...	608	608	14,911	11
12	Copper River Packing Co.	Port Nellie Juan	843	...	843	16,899	...	16,899	5,623	...	5,623	731	...	731	...	...	...	24,096	12
13	Crystal Falls Fish Co.	Crystal Falls (Cordova)	1,435	...	1,435	...	...	...	...	...	...	1,336	...	1,336	200	...	200	2,971	13
14	Ellamar Packing Co.	Port Nellie Juan (2)	21	...	21	5,914	...	5,914	6,783	...	6,783	197	...	197	...	...	...	12,915	14
15	Emard Packing Co.	Anchorage	3,656	4,245	7,901	5,475	...	5,475	7,221	...	7,221	4,835	...	4,835	...	4,899	4,899	30,331	15
16	Fidalgo Island Packing Co.	Port Graham	10,412	...	10,412	18,401	...	18,401	3,798	...	3,798	931	...	931	1,471	...	1,471	35,013	16
17	Halferty Canneries, Inc.	Kodiak (3)	...	...	...	15,291	...	15,291	5,535	...	5,535	44	...	44	...	...	...	20,870	17
		Cordova (4)	22,997	9,084	32,081	12,232	1,360	13,592	12,080	...	12,080	(b)9,969	...	9,969	310	2,532	2,842	70,564	
18	P. E. Harris Co., Inc.	False Pass	23,200	...	23,200	8,086	...	8,086	43,647	...	43,647	...	...	...	27	...	27	74,960	18
19	Harrison Packing Co.	Dayville	...	...	...	2,896	...	2,896	1,796	...	1,796	81	...	81	...	...	...	4,773	19
20	J. H. Hoekzema Canning Co.	Kasilof	...	24	24	...	...	...	...	...	...	...	24	24	...	18	18	66	20
21	Island Seafoods Co.	Kodiak, etc. (fl.)	...	2,274	2,274	...	4,236	4,236	...	2,309	2,309	...	83	83	...	...	...	8,902	21
22	Ivanof Bay Packing Co.	Ivanof Bay	8,619	2,874	11,493	9,173	658	9,831	8,772	...	8,772	(c)2,752	...	2,752	207	633	840	33,688	22
23	Kadiak Fisheries Co.	Port Bailey	15,166	...	15,166	59,130	...	59,130	14,924	...	14,924	883	...	883	34	...	34	90,137	23
24	Kenai Packers	Kenai	11,944	...	11,944	7,972	...	7,972	2,674	...	2,674	2,323	...	2,323	2,887	...	2,887	27,800	24
25	King Fisheries	Kodiak, etc. (fl.)	3	...	3	63	...	63	44	...	44	375	...	375	....	...	...	485	25
26	Libby, McNeill & Libby	Moser Bay & Kenai	15,276	12,673	27,949	46,280	730	47,010	12,400	...	12,400	3,712	...	3,712	4,158	...	4,158	95,229	26
27	New England Fish Co. (5)	Orca	22,946	9,256	32,202	14,450	3,948	18,398	13,119	...	13,119	(d) 10,815	...	10,875	310	2,556	2,866	77,460	27
		Port Bailey (6)	4,792	...	4,792	731	...	731	2,324	...	2,324	154	...	154	1	...	1	8,002	
28	Ouzinkie Packing Corp.	Ouzinkie	2,436	...	2,436	20,165	...	20,165	10,393	...	10,393	179	...	179	61	...	61	33,234	28
29	Pacific American Fisheries, Inc.	King Cove, Squaw Harbor, Chignik, Alitak, Snug Harbor & "Neva" (fl.) **	(7)30,085	10,382	40,467	48,549	6,785	55,334	(7) 45,002	4,387	49,389	1,973	...	1,973	449	...	449	147,612	29
30	Parks Canning Co.	Uyak	11,492	3,832	15,324	12,231	876	13,107	11,696	...	11,696	(e) 3,669	...	3,669	277	844	1,121	44,917	30
31	H. M. Parks Co.	Cordova & Pr. Wm. Sound	2,873	958	3,831	3,058	219	3,277	2,925	...	2,925	(f) 919	...	919	70	211	281	11,233	31
32	Peninsula Packers	False Pass, Zacher Bay & Thumb Bay (fl.)	11,618	...	11,618	6,025	...	6,025	10,843	...	10,843	220	...	220	10	...	10	28,716	32
33	Port Ashton Packing Corp.	Port Ashton (8)	592	...	592	14,127	...	14,127	2,630	...	2,630	864	...	864	...	...	...	18,213	33
34	Port Chatham Packing Co.	Portlock	...	2,826	2,826	...	2,441	2,441	...	1,197	1,197	...	89	89	...	226	226	6,779	34
35	Port Wrangell Packing Co.	Chignik	...	57	57	...	55	55	...	...	...	...	1,138	1,138	...	...	...	1,250	35
36	Resurrection Bay Co.	Seward	796	...	796	2,902	...	2,902	640	...	640	876	...	876	...	...	...	5,214	36
37	San Juan Fishing & Packing Co.	Port San Juan	912	...	912	21,188	...	21,188	4,060	...	4,060	1,293	...	1,293	...	...	...	27,453	37
		Uganik Bay	5,712	...	5,712	31,609	...	31,609	17,008	...	17,008	716	...	716	...	...	...	55,045	
38	Seldovia Bay Packing Co.	Seldovia, etc.	11,168	1,198	12,366	19,044	...	19,044	6,197	...	6,197	2,226	...	2,226	3,804	...	3,804	43,637	38
39	Snug Harbor Packing Co.	Snug Harbor	(9)5,351	...	5,351	5,956	...	5,956	289	...	289	1,294	...	1,294	(9) 327	...	327	13,217	39
40	Southwest Canning Co.	Ouzinkie (10)	1,880	...	1,880	4,851	...	4,851	2,808	...	2,808	67	...	67	728	...	728	10,334	40
41	Uganik Fisheries, Inc.	Uganik Bay	3,290	...	3,290	23,322	...	23,322	12,896	...	12,896	478	...	478	...	...	...	39,986	41
42	Washington Fish & Oyster Co.	Port Willaims	1,833	...	1,833	9,866	...	9,866	14,799	...	14,799	341	...	341	...	...	...	26,839	42
43	West Point Canning Co.	Uganik Bay	...	1,089	1,089	...	699	699	...	222	222	...	6	6	...	...	...	2,016	43
44	Western Fisheries Co.	Cordova	11,492	3,832	15,324	12,231	877	13,108	11,696	...	11,696	(e)3,669	...	3,669	277	844	1,121	44,918	44
	TOTAL CANNING COMPANIES		278,933	90,063	368,996	539,911	31,788	571,679	372,159	9,372	381,531	63,100	1,777	64,877	19,275	14,834	34,109	1,421,192	
			FREEZERSHIP FISH (Frozen in Central Alaska for canning)†																
1	Malaspina Fisheries Co.	"Michelle Eve"	3	...	3	1,259	...	1,259	683	...	683	1	...	1	...	...	...	1,946	1
2	M/V "North Star" & Owners	"North Star"	...	...	...	2,478	431	2,909	...	...	...	...	...	...	...	...	...	2,909	2
	TOTAL FREEZERSHIPS		3	...	3	3,737	431	4,168	683	...	683	1	...	1	...	...	...	4,855	
	GRAND TOTAL		278,936	90,063	368,999	543,648	32,199	575,847	372,842	9,372	382,214	63,101	1,777	64,878	19,275	14,834	34,109	1,426,047	

NOTES: — Columns of 1-lb. Talls include 4-lb. Flats, as follows: (a) All; (b) 3,436 cases; (c) 666 cases; (d) 2,326 cases; (e) 888 cases; (f) 223 cases.

(1) Alitak and Karluk fish canned, respectively, in plants of Pacific American Fisheries and Kadiak Fisheries Co. (2) Canned in plant of Copper River Packing Co. (3) Share from joint operation with Parks Canning Co. (4) & (5) Shares from joint operation of Halferty Canneries, Inc., New England Fish Co. and Western Fisheries Co. (6) Canned in plant of Kadiak Fisheries Co. (7) Includes 1-lb Flats, 11,623 cases Reds and 502 Chums. (8) Canned through joint operation in plant of San Juan Fishing & Packing Co. (9) Includes 1-lb. Flats, 1,475 cases Reds and 25 Kings. (10) Canned in plant of Ouzinkie Packing Corp.

† Freezership fish from Central Alaska areas was custom-canned for the operators of the vessels: that of the "Michelle Eve" in the Ouzinkie Packing Corp. plant at Ouzinkie, Alaska; that of the "North Star" in various Puget Sound canneries. A further small quantity of Central Alaska salmon, canned on Puget Sound, could not be segregated and is included in the Puget Sound tabulation.

* New Cannery.

** Packs of Pacific American Fisheries, Inc. are tabulated in detail on another page of this issue.

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SALMON
S. E. ALASKA

NOT much was expected of Southeast Alaska in 1952, and the region ran true. Its pack of a bit better than 1¼ million cases showed a slight gain over that of the previous even-numbered year, it is true, but it fitted very well into the pattern of the cycle.

Red salmon production in Southeast Alaska continued to maintain its gratifying, if rather unimportant, gain. Pink were down toward the half-million horizon.

Chums were strong, rising above a half-million cases—of which 115,000 were the production of the excellent fishing encountered during the special fall season, when fishing was opened on a few specific bays known to be frequented by good-quality fall Chums and no late-running Pinks. In addition to the Chums canned in Alaska during the fall season, some were carried south by freezership.

The early opening advance-season which had been programmed to permit the taking of some Reds and early Chums was abandoned in advance of the 1952 opening when fishermen and packer interest lagged due to the cost and difficulty of mounting an early operation and then idling it for a considerable period until the advent of the main season.

After a number of years of uniform opening for Southeast Alaska, the Fish and Wildlife Service announced late in 1952 that it was committed to return to a staggered opening in 1953, with a plan by which the early-run districts would start fishing in advance of the others, and the definitely late districts would be accorded later fishing time.

Somewhat as a prelude to the acceptance of the staggered opening in official thinking, the Fish and Wildlife Service opened 1952 fishing in the northern districts of Southeast Alaska July 24, instead of the originally-scheduled Aug. 4 opening. Other districts were opened July 28. The yield during this extra period, however, was somewhat less than had been anticipated, and a good many Puget Sound seine boats which rushed north at the word of the early opening found disappointing fishing, and missed the best run of the season on Puget Sound.

The serious condition which has developed in the northern part of Southeast Alaska, notably the Icy Strait district, is made particularly evident by the table at the bottom of this page.

It will be noted that there was a sharp falling-off in the pack from this district following the favorable production of 1944, and that since that time the pack has never attained the level of 100,000 cases, while the average is below 60,000 cases.

This is in sharp contrast with the district's experience in some previous years—1936, for example, when the district produced 628,301 cases, exactly 10 times the 1952 pack of 62,844 cases.

A somewhat similar situation developed about the same time in the Western and Eastern districts, although the decline was never as severe; and in recent years there has been some evidence of recovery, notably in the Eastern district.

In the case of the Eastern district the packs of 1951 and 1952 showed substantial recovery, averaging 132,000 cases, as compared with an average of 59,000 for the five years preceding 1951.

The situation in the Western district also shows definite improvement.

Southeast Alaska Canned Salmon Packs by Subdivisions

YAKUTAT AREA (Cases)						YEAR	CAPE FAIRWEATHER – DIXON ENTRANCE * (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
11,686	5,774	275	15,331	3,216	36,282	1933	69,440	1,472,239	424,586	80,474	4,930	2,051,669
19,407	4,788	311	30,316	4,633	59,455	1934	84,991	2,617,574	393,901	128,211	10,961	3,235,638
20,006	4,966	148	15,766	2,081	42,967	1935	139,423	2,195,094	540,800	126,727	9,027	3,011,071
22,545	9,737	105	13,609	1,102	47,098	1936	195,462	2,915,407	778,234	121,113	19,403	4,029,619
17,470	7,826	385	11,242	1,794	38,717	1937	150,274	2,135,342	503,381	77,283	28,899	2,895,179
27,211	7,417	397	26,854	1,450	63,329	1938	165,380	1,879,352	474,056	116,911	14,920	2,650,619
25,463	2,237	47	9,301	1,629	38,677	1939	169,895	1,473,121	296,057	56,935	812	1,996,820
14,947	4,962	164	27,747	511	48,331	1940	110,661	1,453,109	485,623	128,333	713	2,178,439
18,624	4,505	566	41,402	799	65,896	1941	119,235	3,636,256	319,372	152,569	1,005	4,228,437
11,005	2,465	10	21,513	96	35,089	1942	105,506	1,753,582	596,171	156,409	1,950	2,613,618
18,096	1,618	—	12,606	234	32,554	1943	67,247	1,036,821	673,692	80,928	1,626	1,860,314
15,386	3,447	9	14,301	789	33,926	1944	116,922	1,082,648	663,505	74,543	1,008	1,938,626
18,079	795	105	18,018	576	37,573	1945	111,717	1,040,854	266,732	90,687	1,980	1,511,970
4,081	1,939	23	4,056	358	10,457	1946	54,348	997,975	322,597	88,891	2,058	1,465,869
5,632	1,169	255	4,052	160	11,268	1947	50,273	679,648	257,689	69,490	3,843	1,060,943
3,589	4,042	506	10,840	305	19,282	1948	36,118	680,400	406,887	148,384	5,380	1,277,169
—	—	No operation in 1949		—	—	1949	39,552	2,103,982	243,483	124,919	1,015	2,512,951
9,154	1,873	647	6,252	271	18,197	1950	36,720	533,789	499,775	110,092	195	1,180,571
11,748	1,675	725	11,732	95	25,975	1951	58,569	1,224,907	465,609	252,661	541	2,002,287
5,428	1,813	1,296	19,113	660	28,310	1952	68,969	577,179	509,335	103,649	1,883	1,261,015
5,983	1,881	635	9,587	266	18,353	Aver.	47,985	1,024,051	425,018	147,941	1,803	1,646,799

ICY STRAIT DISTRICT ** (Cases)						YEAR	WESTERN DISTRICT ** (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
29,480	290,238	97,556	14,480	47	431,801	1933	—	—	—	—	—	—
32,035	340,032	97,572	20,291	3,216	493,146	1934	—	—	—	—	—	—
60,601	185,700	76,562	16,152	2,707	341,722	1935	—	—	—	—	—	—
69,191	349,700	183,036	20,791	5,583	628,301	1936	25,290	242,902	148,839	12,503	2,774	432,308
39,640	208,448	56,621	6,906	405	312,020	1937	18,477	194,675	90,053	5,616	24	308,845
46,526	158,698	52,890	14,058	215	272,387	1938	20,868	163,377	56,116	8,394	48	248,803
46,675	78,127	38,943	3,615	151	167,511	1939	24,839	87,137	35,328	3,628	36	150,968
18,846	121,320	74,615	13,409	262	228,452	1940	13,319	176,542	100,444	16,400	58	306,763
8,948	218,163	17,418	10,231	232	254,992	1941	16,962	562,046	56,078	22,368	456	657,910
10,964	118,790	44,834	8,311	248	183,147	1942	15,193	339,504	130,855	26,112	71	511,735
11,397	60,881	63,985	3,147	124	139,534	1943	16,266	123,318	177,210	9,039	55	325,888
21,568	123,896	67,537	3,830	77	216,908	1944	21,771	277,172	191,816	7,384	7	498,150
13,827	45,971	25,095	4,789	278	89,960	1945	23,247	109,183	65,431	6,585	19	204,465
6,315	26,449	31,376	4,436	60	68,636	1946	14,813	81,192	74,500	6,837	479	177,821
6,504	30,952	14,498	3,014	118	55,086	1947	17,718	92,612	57,592	14,658	837	183,417
501	2,745	6,893	1,239	—	11,378	1948	11,308	54,905	64,803	37,562	555	169,133
5,665	51,485	29,760	10,436	41	97,387	1949	12,580	378,876	43,136	29,721	442	464,755
3,362	3,287	25,164	5,473	22	37,308	1950	17,363	24,846	60,584	29,992	54	132,839
8,616	30,315	33,741	13,369	142	86,183	1951	16,195	147,996	107,998	65,040	6	337,235
11,169	17,919	26,184	7,355	217	62,844	1952	13,642	84,743	82,371	18,130	208	199,094
5,863	21,150	24,348	7,574	84	59,020	Aver.	14,218	138,273	71,778	36,089	253	260,611

* Cape Fairweather to Dixon Entrance comprises all Southeast Alaska with the exception of Yakutat, therefore figures in this section are the total of all following districts.

** Figures for these districts of Southeast Alaska are the provisional season totals taken from current records of the Fish & Wildlife Service. Final data for Southeast Alaska has not been reported by subdivisions since 1949.

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EXPORTERS

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Canadian Herring	California Mackerel
Canadian Pilchards	California Squid

CABLE ADDRESS — MISKAND

1952 - SOUTHEAST ALASKA CANNED SALMON PACK - 1952

	COMPANY	CANNERY LOCATION	RED or SOCKEYE			PINK			CHUM			COHO			KING	GRAND TOTAL (full cases)	
			1 lb. Talls etc.	½ lb. Flats (8 doz)	Total	1 lb. Talls etc.	½ lb. Flats (8 doz)	Total	1 lb. Talls etc.	½ lb. Flats (8 doz)	Total	1 lb. Talls etc.	½ lb. Flats (8 doz)	Total	1-lb. Talls		
1	Annette Islands Canning Co.	Metlakatla	1,201	...	1,201	24,857	...	24,857	19,247	...	19,247	829	...	829	...	46,134	1
2	Bellingham Canning Co. and Icy Straits Salmon Co.	Yakutat and Hoonah	(1) 10,152	...	10,152	(1) 10,196	...	10,196	(1) 22,389	...	22,389	(1) 23,772	...	23,772	(1) 323	66,832	2
3	Excursion Inlet Packing Co.	Excursion Inlet* (2)	2,594	114	2,708	9,602	...	9,602	5,130	...	5,130	1,680	1,007	2,687	37	20,164	3
4	Farwest Wrangell Co.	Wrangell	...	2,745	2,745	11,628	8,404	20,032	14,488	15	14,503	17,264	244	17,508	(3) 655	55,443	4
5	Fidalgo Island Packing Co.	Ketchikan	803	...	803	17,127	...	17,127	11,754	...	11,754	1,279	...	1,279	...	30,963	5
		Pillar Bay (4)	214	...	214	5,146	...	5,146	2,752	...	2,752	435	...	435	19	8,566	
6	Haines Packing Co.	Letnikof Cove	...	6,370	6,370	...	15	15	...	4,169	4,169	...	968	968	(5) 172	11,694	6
7	P. E. Harris Co., Inc.	Hawk Inlet	2,624	...	2,624	12,114	...	12,114	4,792	...	4,792	2,087	...	2,087	...	21,617	7
8	Hood Bay Salmon Co.	Hood Bay	597	...	597	13,061	...	13,061	20,199	...	20,199	356	...	356	...	34,213	8
9	Hydaburg Cooperative Assn.	Hydaburg	4,760	...	4,760	10,822	...	10,822	4,360	...	4,360	717	...	717	...	20,659	9
10	Independent Salmon Canneries, Inc.	Ketchikan	1,251	...	1,251	9,687	...	9,687	29,489	...	29,489	1,969	...	1,969	...	42,396	10
11	Kayak Packing Co.	Dry Bay (fl.)	3,010	...	3,010	15	...	15	25	...	25	...	...	...	512	3,562	11
12	Kayler-Dahl Fish Co., Inc.	Petersburg	...	4,280	4,280	4,350	4,375	8,725	8,560	5,200	13,760	2,735	5,975	8,710	(5) 550	36,025	12
13	Keku Canning Co.	Kake	216	...	216	21,363	...	21,363	26,949	...	26,949	1,038	...	1,038	6	49,572	13
14	Ketchikan Packing Co.	Ketchikan	924	...	924	18,422	...	18,422	10,345	...	10,345	2,171	...	2,171	...	31,862	14
15	Klawock Oceanside Packing Co.	Klawock	590	79	669	13,206	8,190	21,396	7,905	64	7,969	687	63	750	...	30,784	15
16	Libby, McNeill & Libby	Taku, George Inlet & Craig	2,910	731	3,641	50,851	12,323	63,174	37,602	...	37,602	2,728	1,197	3,925	50	108,392	16
17	Lutak Fish Co.	Lutak Inlet	(b) 1,307	...	1,307	(6) 11	...	11	(6) 361	...	361	(6) 89	...	89	(6) 32	1,800	17
18	Nakat Packing Corporation	Ketchikan, Hidden Inlet & Waterfall	1,656	5,964	7,620	68,387	19,995	88,382	41,300	5,663	46,963	8,588	8,769	17,357	...	160,322	18
19	New England Fish Company	Chatham, Noyes Island & Ketchikan	3,767	...	3,767	73,065	...	73,065	83,702	...	83,702	9,060	...	9,060	...	169,594	19
20	Northern Products Corp.	Sitka (7)	...	...	...	...	21	21	...	11	11	...	1,135	1,135	...	1,167	20
21	Oceanic Fisheries Co., Inc.	Port Conclusion	94	76	170	9,481	1,286	10,767	3,829	...	3,829	401	...	401	...	15,167	21
22	Pacific American Fisheries, Inc.	Petersburg, Kasaan, Pillar Bay & "Neva" (fl.)**	2,400	1,048	3,448	54,544	12,154	66,698	46,099	...	46,099	2,943	2,093	5,036	(8) 44	121,325	22
23	Pelican Packing Co.	Pelican, etc. (9)	531	...	531	2,987	...	2,987	10,281	3	10,284	3,544	821	4,365	...	18,167	23
24	Pyramid Fisheries Co., Inc.	Sitka	677	...	677	4,877	232	5,109	10,274	...	10,274	246	...	246	...	16,306	24
25	Queen Fisheries, Inc.	Floating	...	15	15	...	1,152	1,152	...	6,112	6,112	...	124	124	...	7,403	25
26	Scow Bay Canning Co.	Petersburg	1,510	...	1,510	12,537	...	12,537	23,006	...	23,006	1,943	...	1,943	15	39,011	26
27	Sitka Canning Co.(10)	Sitka	...	12	12	...	46	46	185	...	185	...	30	30	...	(11) 273	27
28	Specialty Processors, Inc.	Petersburg	72	...	72	2,401	...	2,401	2,093	...	2,093	89	...	89	5	(12) 4,660	28
29	Superior Packing Co.	Tenakee	257	...	257	13,274	...	13,274	10,366	...	10,366	377	...	377	...	24,274	29
30	Todd Packing Co.	Todd	463	...	463	11,527	...	11,527	6,737	...	6,737	509	...	509	...	19,236	30
31	Vita Food Products, Inc.	Sitka & Pelican (13)	...	...	...	10	25	35	7	1	8	2,214	1,231	3,445	...	3,488	31
32	Wards Cove Packing Co.	Wards Cove	2,357	...	2,357	28,724	...	28,724	32,335	...	32,335	3,106	...	3,106	...	66,522	32
33	Whiz Fish Products, Inc.	Tyee (14)	383	...	383	11,789	...	11,789	6,884	...	6,884	(15) 4,146	...	4,146	...	23,202	33
	TOTAL CANNERIES		47,320	21,434	68,754	526,061	68,218	594,279	503,445	21,238	524,683	97,002	23,657	120,659	2,420	1,310,795	
	FREEZERSHIP FISH (Canned on Puget Sound) †																
1	Arctic Maid Fisheries	"Arctic Maid" (A)	...	...	...	...	...	...	700	700	1,400	...	...	...	...	1,400	1
2	Grimes Packing Co.	"Reefer II" (B)	...	...	...	...	...	...	(16) 1,070	...	1,070	(6) 16	...	16	...	1,086	2
3	M/V "North Star" & Owners	"North Star"	...	...	...	...	...	...	3,983	...	3,983	...	...	...	...	3,983	3
4	Reefer King Co.	"Reefer King" (D)	...	...	...	...	...	...	712	...	712	...	...	...	...	712	4
5	John S. York	"K - J" (E)	...	...	...	4	...	4	14	...	14	(17) 446	...	446	...	464	5
	TOTAL FREEZERSHIPS		...	...	...	4	...	4	6,479	700	7,179	462	...	462	...	7,645	
	GRAND TOTAL		47,320	21,434	68,754	526,065	68,218	594,283	509,924	21,938	531,862	97,464	23,657	121,121	2,420	1,318,440	

NOTES: — (1) Bellingham-Icy Straits Salmon Co. pack includes (in Tall columns) 4-lb. Flats as follows: 1,513 cases Reds; 293 Pinks; 26 Chums; 226 Cohoes and 143 Kings. Included with Cohoes, also, are 31 cases Steelhead Talls. (2) Excursion Inlet pack purchased in equal shares by Columbia River Packers Assn. and Pacific American Fisheries, and not included in their tabulated packs. (3) Includes 9 full cases Halves. (4) F. I. P. share from joint pack in P. A. F. Petersburg cannery. (5) Halves, full cases. (6) All 4-lb. Flats. (7) Custom-canned in plant of Sitka Canning Co. (8) Includes 35 full cases Halves. (9) Formerly owned by Whiz Fish Products Co.; all the Halves listed, and a few of the Coho Talls, were custom-canned by Sitka Canning Co. (10) Formerly Smith & Morrow. (11) Not including 5,694 cases custom-canned for others. (12) Share from joint operation with Libby, McNeill & Libby. (13) Custom-canned in plants of Sitka Canning Co. and Pelican Packing Co. (14) Formerly owned by Sebastian-Stuart Fish Co. (15) Partly custom-canned in Pelican plant.

† Freezership fish from Southeast Alaska were custom-canned in Puget Sound plants, as follows: (A) Washington Fish & Oyster Co. (E) Haines Oyster Co. (Yakutat fish). (D) Farwest Fishermen, Inc. (B) Friday Harbor Canning Co. (16) Includes 923 cases 4-lb. Flats. (17) Includes 434 cases 4-lb. Flats.

* New cannery. ** Pacific American Fisheries' pack is tabulated in detail on another page of this issue.

Southeast Alaska Canned Salmon Pack by Subdivisions

EASTERN DISTRICT (Cases)						YEAR	WRANGELL DISTRICT (Cases)					
Reds	Pinks	Chums	Cohoes	Kings	TOTAL		Reds	Pinks	Chums	Cohoes	Kings	TOTAL
16,687	284,097	135,981	14,698	5,016	456,479	1936	25,405	326,866	93,544	27,726	1,085	474,626
8,923	323,556	65,931	6,904	8,257	413,571	1937	22,067	383,115	61,189	22,378	1,959	490,708
14,244	260,145	58,041	13,245	4,794	350,469	1938	18,492	217,161	59,652	20,433	86	315,824
11,730	217,432	53,199	7,179	317	289,857	1939	17,137	318,808	40,525	12,712	18	389,200
7,332	224,495	76,621	9,588	261	318,297	1940	21,306	165,783	73,544	32,040	26	292,699
9,079	601,161	64,880	9,210	113	684,443	1941	28,709	633,163	33,587	35,343	10	730,812
8,139	254,772	74,580	12,108	271	349,870	1942	22,212	167,742	67,652	42,730	895	301,231
7,192	93,048	110,912	5,452	799	217,403	1943	11,618½	120,730	80,696	17,431½	68	230,544
10,905	116,501	109,884	5,384	426	243,100	1944	16,065	59,256	66,069	9,024	17	150,431
10,168	94,505	29,267	4,010	207	138,157	1945	17,600	118,531	17,603	15,571	101	169,406
6,082	29,636	21,480	4,622	122	61,942	1946	6,417	66,258	16,017	18,894	173	107,759
5,342	38,272	28,935	3,960	510	77,019	1947	6,226	99,343	23,870	11,315	2,308	143,062
4,240	13,308	15,378	12,542	1,736	47,204	1948	7,260	53,860	55,460	22,799	2,971	142,350
92	43,944	6,055	8,661		58,752	1949	9,573	312,318	22,417	17,176	563	362,047
5,015	13,028	32,096	3,096	183	53,418	1950	7,190	36,846	44,815	30,849	55	119,755
1,146	74,522	68,391	20,777	168	165,004	1951	16,405	189,750	88,994	61,353	315	376,817
1,986	51,015	41,246	6,468	2	100,717	1952	13,445	78,552	80,763	30,359	1,413	204,532
2,496	39,163	32,633	10,309	418	83,019	Average	10,775	134,265	58,490	36,503	1,063	241,100

SOUTH PRINCE OF WALES ISLAND DISTRICT (Cases)					YEAR	SOUTHERN DISTRICT (Cases)					REGIONAL GRAND TOTAL
Reds	Pinks	Chums	Cohoes	TOTAL		Reds	Pinks	Chums	Cohoes	TOTAL	
25,716	620,300	104,038	33,170	783,224	1936	60,217	1,222,241	192,641	32,834	1,507,933	4,067,717
23,545	345,068	65,613	33,908	468,134	1937	36,031	671,257	165,508	17,098	889,894	2,933,896
20,395	329,083	81,737	39,708	470,923	1938	44,399	749,432	162,473	27,346	983,650	2,713,948
22,107	207,989	45,249	11,648	286,902	1939	46,699	549,500	80,549	16,427	693,175	2,035,497
11,283	251,718	58,655	19,001	340,657	1940	36,652	503,005	98,092	35,881	673,630	2,226,770
11,548	584,582	55,624	33,178	684,932	1941	42,980	1,012,240	89,384	38,846	1,183,450	4,294,333
12,091	337,418	96,628	36,901	483,038	1942	37,713	533,057	181,262	28,308	780,340	2,648,707
5,656	162,482	75,217	15,780	259,135	1943	23,660	473,156	165,752	29,537	692,105	1,892,868
7,790	144,209	94,371	18,816	265,186	1944	38,465	349,073	132,735	29,482	549,755	1,972,552
11,217	225,606	43,240	26,274	306,337	1945	33,735	418,327	77,829	30,873	560,764	1,549,543
6,141	203,887	67,452	17,340	294,820	1946	16,994	582,377	101,901	35,336	736,608	1,476,326
4,626	110,324	42,141	12,150	169,241	1947	9,279	308,929	88,107	22,248	428,563	1,072,211
2,886	163,397	64,240	26,125	256,648	1948	9,661	388,325	192,232	39,446	629,644	1,296,451
3,014	406,385	41,200	17,701	468,300	1949	8,561	909,596	100,512	41,364	1,060,033	2,512,951
2,591	182,381	83,659	16,199	284,830	1950	6,231	273,449	247,876	28,779	556,335	2,383,253
4,686	127,347	44,407	27,598	204,038	1951	13,438	592,425	124,633	38,474	768,970	1,964,214
10,952	103,694	28,715	15,632	158,993	1952	17,775	241,256	250,056	25,748	534,835	1,289,325
4,826	196,641	52,444	20,651	274,562	Average	11,133	481,010	183,102	34,760	709,963	1,889,239

NOTE: — Small quantities of Kings have been included with Cohoes in the last two districts listed. "Average" figures are for the last 5 years.
Figures are provisional season totals taken from current records of the Fish & Wildlife Service.
Final data for Southeast Alaska has not been reported by subdivisions since 1949.

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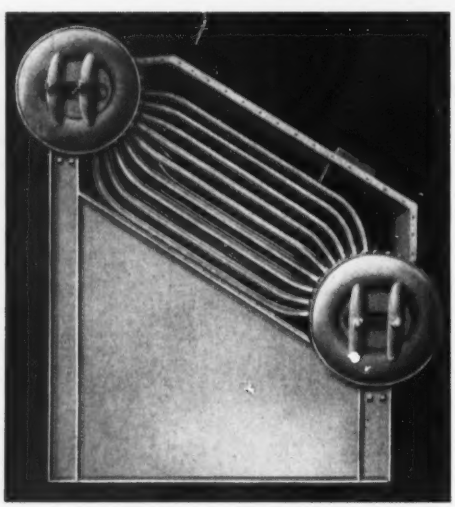
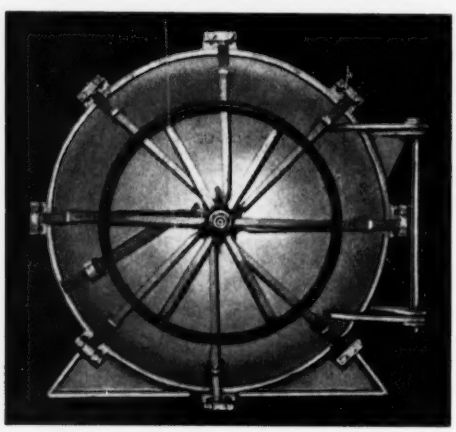


SAFEWAY RETORT DOORS



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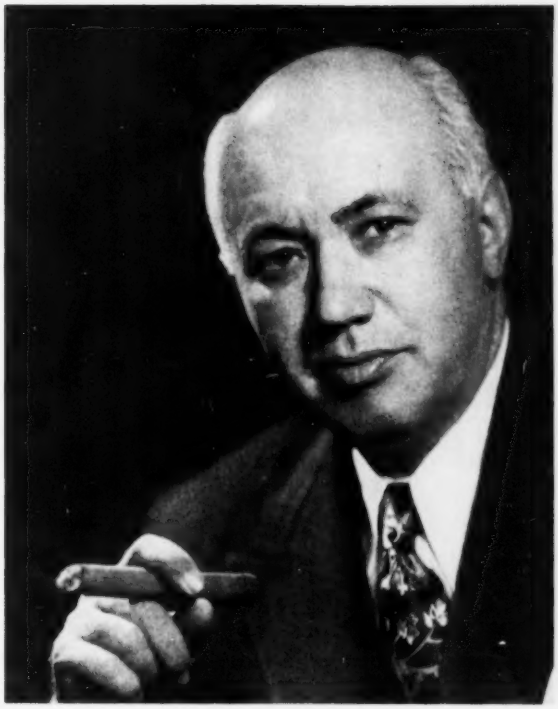

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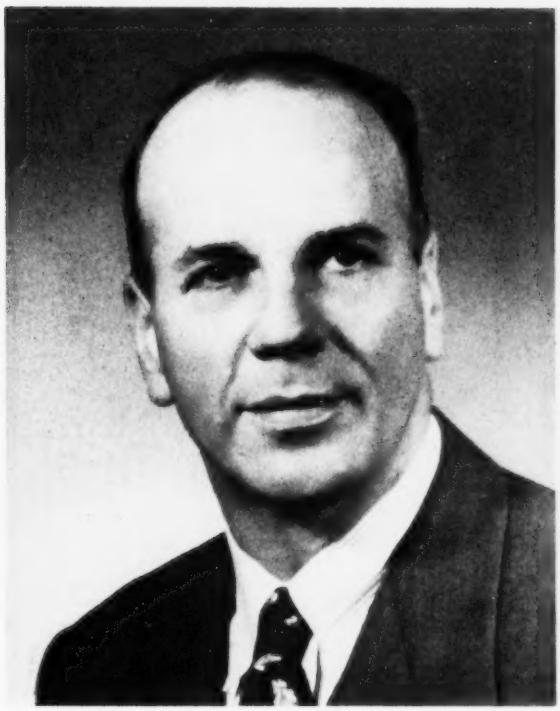
President, California Marine Curing & Packing Co.



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Seattle

President, Northwest Salmon Canners Association
Asst. Secy., Alaska Year-Round Canneries Co.
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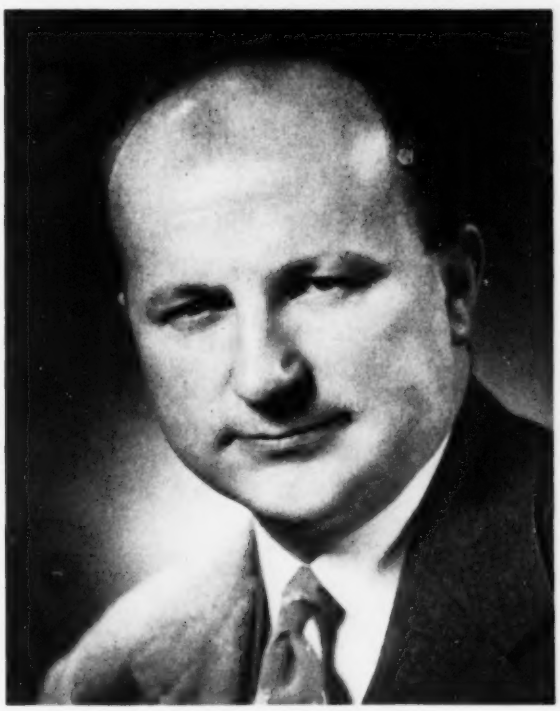

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SALMON
PUGET SOUND

PUGET SOUND salmon packing of 1952 was primarily the reflection of the Fraser River Sockeye run.

In numerical cases the pack for the region runs far behind recent seasons, but on a cyclic basis the Sockeye report is very good indeed.

Being an even-numbered year, 1952 naturally produced no Pinks on Puget Sound. Lacking the market stimulus, and the great raw material supply of an immense British Columbia run, the Sound's Chum pack did not remotely compare with the half-million-case pack of this grade in 1950.

Depending essentially on Sockeye, the Puget pack nevertheless was extremely good, if one examines it in the light of the previous years of this cycle.

1952 Best Cycle Year Run Since 1912

For example, the Puget Sound pack of Sockeyes in 1952 was the best for any year *of the cycle* since 1912—in other words, the best which this cycle year has produced since the Hell's Gate disaster of 1913.

The yield of the Fraser River as a whole in 1936—Canadian and Americans packs taken together—was very slightly better than in 1952, but with the exception the combined pack was the best of the cycle years since 1912.

Early July fishing was permitted in 1952 to harvest the early-running Stuart lake Sockeyes, and they yielded a very fair production in a steady fishery, with no marked peaks. The heavy fishing came just after the middle of July, peaking on the 24th and 25th. The Canadian seiners had lost some of this good fishing by a strike, but a special opening of Canadian waters permitted the taking of 200,000 fish in a single day.

The Sockeye run of 1952 was marked by the presence of some extremely large fish, with weights of 15 pounds actually recorded by competent reporters. That the average weight of fish taken did not fully reflect the presence of these large fish is attributed to the fact the run also contained a substantial number of "jacks," auguring well for fishing in 1953.

The presence, and numbers, of "jacks" was particularly significant on the Quesnel, where no less than 5,000 three-year-old "Jacks" were counted on the spawning beds. A rule-of-thumb of stream surveyors is that the ratio of mature spawners to "jacks" is usually about 20-to-1. If borne out in the Quesnel in 1953, this condition could produce a run of several hundred thousand Sockeye, with an escapement of 100,000.

1952 - PUGET SOUND CANNED SALMON PACK - 1952

	COMPANY	CANNERY LOCATION	SOCKEYE			PINK	CHUM		COHO or SILVER			KING or CHINOOK			GRAND TOTAL (Full Cases)	
			½-lb. Flats, etc. (48 lbs.)	¼-lb. Flats (48 lbs.)	TOTAL	Total † All sizes (48 lbs.)	1-lb. Talls & 4-lb. Flats	½-lb. Flats (8 doz.)	TOTAL	1-lb. Talls	4-lb. Flats	½-lb Flats (8 doz.)	½-lb. Flats (48 lbs.)	TOTAL	1/Talls & ½ & ¼ 4/Flats	½-lb. Flats (48 lbs.)	TOTAL	
1	Alaska Packers Assn.	Bellingham (15)	10,768	...	10,768	4	...	1	1	...	...	98	...	98	...	76	76	10,947
2	American Packing Co.	Anacortes	4,842	...	4,842	...	15,668	...	15,668	...	...	...	...	...	...	...	...	(16)20,510
3	Anacortes Canning Co.	Anacortes	2,225	...	2,225	23	494	288	782	211	...	1,145	...	1,356	...	94	94	4,480
4	Beach Packing Co.	Friday Harbor (17)	234	6	240	(d) 23	19	4	23	60	89	65	4	218	5	5	10	514
5	Burk Canning Co., Inc.	Bellingham (15)	5,206	376	5,582	2	...	...	...	...	...	56	...	56	...	23	23	5,663
6	Columbia River Packers Assn., Inc.	Bellingham	8,015	198	8,213	3	...	1	1	...	...	108	...	418	...	46	46	8,681
7	Dressel-Collins Fish Co.	Seattle	1,564	...	1,564	(a)102	8,371	1,011	9,382	3,773	...	6,555	310	10,328	...	2	12	(18)21,388
8	Everett Fish Co.	Everett	...	...	...	...	(2)4,869	...	4,869	335	511	...	...	846	...	...	...	5,715
9	Farwest Fishermen, Inc.	Anacortes	10,693	1,020	11,713	(b)371	73,720	10	73,730	29,619	814	619	1,945	32,997	145	710	855	119,666
10	Fishermen's Packing Corp.	Anacortes	12,657	6,041	18,698	93	10,589	3,559	14,148	8,159	...	9,266	3,063	20,488	...	1,930	1,930	55,357
11	Food Specialty Co.	Seattle	...	...	...	...	9,100	...	9,100	4,000	11,500	...	...	15,500	...	...	...	24,600
12	Friday Harbor Canning Co.	Friday Harbor (19)	(1) 6,066	154	6,220	(e)77	(3)3,074	710	3,784	1,684	2,499	1,825	117	6,125	(4) 110	91	201	16,407
13	Grimes Packing Co.	Friday Harbor	...	...	...	...	(5)3,372	...	3,372	...	...	...	...	...	...	...	...	(20)3,372
14	Haines Oyster Co.	Seattle	...	...	...	(c)1,789	(21)1,900	...	1,900	(21)1,700	...	...	...	1,700	...	...	...	5,389
15	Iwersen Canning Co.	Point Roberts	2,734	...	2,734	...	356	281	637	...	...	...	1,485	1,485	...	276	276	3,132
16	John C. Jackson, Inc.	Friday Harbor	3,750	...	3,750	60	1,400	2,650	4,050	...	28	750	1,950	3,811	...	118	118	11,789
17	Kuyler-Dahl Fish Co.	Blaine (23)	2,000	...	2,000	...	10,500	550	11,050	...	...	...	...	1,950	...	...	...	15,000
18	Nelbro Packing Co.	Point Roberts	...	...	...	...	23,070	...	23,070	...	...	...	...	...	...	...	...	(24)23,070
19	New England Fish Co.	Everett	6,787	...	6,787	1	509	741	1,250	9,432	...	5,224	...	14,656	109	209	318	23,011
20	Pacific American Fisheries, Inc.	Bellingham	944	...	944	(6)17,889	20,713	38,602	2	1,033	375	...	1,410	2	13	15	40,972
21	Perfection Smokery	Seattle	...	...	...	...	...	...	...	...	224	...	714	...	68	68	782
22	San Juan Fishing & Packing Co.	Seattle	3,643	...	3,643	(7)4,810	2,535	760	7,345	52	263	780	490	1,215	6	6	12,209
23	Sebastian-Stuart Fish Co.	Anacortes	4,953	...	4,953	...	11,271	...	12,031	1,185	...	5,289	120	6,474	...	33	33	23,567
24	Washington Fish & Oyster Co.	Seattle	4,885	...	4,885	5	18,412	4,015	22,427	9,029	...	15,598	...	24,627	1,168	...	1,168	53,112
25	Whiz Fish Products Co.	LaConner	15,534	...	15,534	...	(8)30,194	95	30,289	6,169	2,750	2,797	...	11,716	...	...	...	(18)57,539
	Miscellaneous (25)		7,414	...	7,414	(f) 6	1,962	22,036	23,998	8,173	1,662	274	...	10,109	1,175	249	1,424	42,951
	Total		114,914	7,795	122,709	2,635	251,549	59,960	311,509	84,361	21,121	56,766	6,049	168,297	2,730	3,943	6,673	611,823

NOTE: — As far as possible, Alaska fish canned on Puget Sound are OMITTED from this table and tabulated with the Alaska packs, though some small quantities of Alaska fish are included here.

Alaska fish canned on Puget Sound but tabulated elsewhere amount to about 103,181 cases of Reds; 994 Pinks; 2,347 Chums; 67 Cohoes and 14 Kings from Bristol Bay; 2,478 Pinks from Central Alaska; and 7,179 Chums and 462 Cohoes from Southeast Alaska — total about 116,722 cases.

No attempt has been made to segregate the pack from British Columbia fish, which probably comprised more than 60% of the Chum total and about 25% of the Cohoes. † Pinks are in Halves unless otherwise noted, but include Talls as follows: (a) 51 cases; (b) 34 cases; (c) 1,798 cases; and 4-lb. cans; (d) 18 cases; (e) 77 cases; (f) 6 cases. (1) Sockeyes, listed as Halves, include 13½ cases 1-lb. Talls.

FOUR-POUND CANS (aside from Pinks and Cohoes) are included with 1-lb. Talls, as follows: (2) 264 cases; (3) 2,930 cases; (4) 14 cases; (5) 2,225 cases; (6) 8,951 cases; (7) 34 cases; (8) 1,956 cases. (15) Canned through joint operation in C.R.P.A. plant. (16) Does not include fish canned for Alaska freezers. (17) Canned through joint operation in Friday Harbor plant. (18) Includes small quantities of Alaska fish, not tabulated elsewhere. (19) Friday Harbor pack includes small quantities of various species, halves and quarters, packed in glass; also some skinned and boned salmon. (20) British Columbia fish from "Reefer #2", custom-canned by Friday Harbor Canning Co. (21) Willapa Bay fish, canned in Seattle. (22) Includes 183 full cases Kippered Cohoes. (23) Blaine Canning Co. plant operated under lease. (24) British Columbia fish, canned in Iwersen plant. (25) Includes custom-canned fish, not tabulated elsewhere.

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PUGET SOUND CANNED SALMON PACK

Puget Sound salmon canning commenced in 1877 with a pack of 5,500 cases, but no segregation by species is available prior to 1889. From the beginning production increased, with much fluctuation, to 22,000 cases in 1887; the average for intervening years being 7,867 cases. Values shown are based on opening prices. "Average" figures at bottom of table are for last ten years.

YEAR	# of Plants Oper.	Sockeye		Pink		Chum		Coho		Chinook		TOTAL		YEAR
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1888	4	...	...	...	...	...	...	...	...	...	...	21,975	$126,356	1888
1889	2	....	...	2,809	$7,584	1,145	$3,435	7,480	$37,400	240	$1,200	11,674	49,619	1889
1890	1	...	...	...	...	4,000	12,000	3,000	15,000	1,000	5,000	8,000	32,000	1890
1891	2	5,538	$24,921	5,647	15,246	3,093	10,825	5,869	19,368	382	2,101	20,529	72,461	1891
1892	2	2,954	11,816	...	...	16,180	56,630	7,206	24,500	86	473	26,426	93,419	1892
1893	3	47,852	103,371	17,530	47,331	11,380	31,295	11,812	59,060	1,200	6,480	89,331	247,537	1893
1894	3	41,781	188,014	9,049	24,432	22,152	60,918	22,418	89,672	...	...	95,400	363,036	1894
1895	7	65,143	273,108	23,633	62,556	38,785	94,741	50,865	154,218	1,542	7,325	179,968	591,948	1895
1896	11	72,979	350,299	...	...	26,550	73,013	82,640	264,448	13,495	67,475	195,664	755,235	1896
1897	12	312,048	1,248,192	57,268	171,804	23,310	64,103	91,900	282,133	9,500	39,045	494,026	1,805,277	1897
1898	18	252,000	1,058,400	...	...	38,400	105,600	98,600	335,240	11,200	50,624	400,200	1,549,864	1898
1899	19	499,646	2,368,334	252,733	734,241	31,481	86,427	111,387	418,176	24,364	103,180	919,611	3,170,358	1899
1900	19	228,704	1,149,000	...	...	89,100	245,025	128,200	512,800	22,350	134,100	469,450	1,940,925	1900
1901	...	1,105,096	....	275,494	...	...	...	...	...	...	...	1,380,590	...	1901
1902	21	339,556	2,047,655	...	...	93,492	467,460	85,817	429,085	30,049	150,245	548,914	3,094,445	1902
1903	22	167,211	1,003,260	181,236	407,984	12,001	30,002	103,450	413,800	14,500	72,500	478,398	1,929,546	1903
1904	13	123,419	653,871	...	...	49,656	124,254	118,127	447,851	14,441	69,352	305,643	1,295,328	1904
1905	24	847,122	4,952,718	70,992	212,976	41,057	102,643	79,335	337,174	1,804	9,922	1,040,310	5,615,433	1905
1906	16	182,241	1,251,236	...	...	149,218	708,781	94,497	472,485	8,139	48,834	430,602	2,481,336	1906
1907	14	93,122	698,416	433,423	1,300,269	50,249	150,847	119,472	476,288	1,814	16,326	698,080	2,642,146	1907
1908	22	170,951	1,196,657	6,075	18,225	47,607	142,821	128,922	644,922	95,210	664,470	448,765	2,669,095	1908
1909	11	1,097,904	6,183,300	370,993	902,342	53,688	128,916	143,133	630,446	13,019	72,604	1,632,949	7,917,608	1909
1910	24	248,014	1,673,095	108	388	146,942	514,297	162,755	895,153	10,064	60,324	567,883	3,143,256	1910
1911	15	127,761	1,168,145	1,046,992	4,302,344	104,321	392,122	256,124	1,591,185	21,823	172,582	1,557,021	7,727,524	1911
1912	20	184,680	1,660,173	700	2,185	60,760	154,193	149,727	761,200	20,252	101,706	416,125	2,679,457	1912
1913	22	1,673,099	10,871,178	791,886	2,092,401	56,225	124,970	61,019	235,372	1,234	5,247	2,583,463	13,329,168	1913
1914	31	335,230	3,208,969	892	4,212	278,801	955,920	151,893	759,689	26,044	167,322	792,860	5,095,839	1914
1915	41	64,584	676,769	583,649	1,795,285	411,724	155,744	180,783	902,335	28,466	145,555	1,269,206	4,675,418	1915
1916	32	84,637	699,161	1,887	8,264	427,878	1,492,161	155,832	957,650	37,030	280,708	707,278	3,437,944	1916
1917	45	411,538	5,366,218	1,124,884	7,823,960	216,285	1,362,634	114,276	1,065,983	57,543	540,904	1,921,554	16,159,699	1917
1918	32	50,723	781,992	6,605	53,336	267,538	1,715,159	235,860	2,532,553	63,472	754,637	624,198	5,837,677	1918
1919	35	64,346	1,186,413	421,215	3,854,113	525,541	1,687,787	210,883	2,618,504	73,618	910,968	1,295,626	12,257,785	1919
1920	11	62,654	1,725,252	4,669	28,860	48,849	3,225,368	24,502	221,688	25,846	370,215	166,520	2,571,385	1920
1921	23	102,967	1,991,368	404,713	1,870,385	30,831	123,608	89,412	798,541	25,567	199,609	653,490	4,983,511	1921
1922	16	48,566	945,178	2,225	13,273	65,552	283,395	111,771	744,656	20,615	222,641	248,729	2,209,143	1922
1923	18	47,402	860,000	475,849	2,429,800	97,081	471,790	122,000	785,000	15,806	150,407	758,138	4,696,997	1923
1924	12	69,369	1,182,358	5,945	39,192	134,360	651,014	87,879	688,950	20,096	216,043	317,649	2,777,557	1924
1925	23	112,023	2,098,683	553,904	3,179,302	43,345	207,546	173,215	1,902,289	29,183	432,349	911,670	7,820,169	1925
1926	14	44,673	532,408	2,107	15,095	112,204	573,411	123,469	1,163,286	27,972	365,826	310,425	2,650,026	1926
1927	21	97,594	2,115,410	578,923	3,669,941	38,129	225,654	135,802	1,358,020	41,796	588,314	892,244	7,957,339	1927
1928	14	60,081	1,207,981	5,597	41,091	146,356	833,114	89,923	777,472	23,419	294,816	325,376	3,154,024	1928
1929	22	111,898	2,203,496	727,621	4,639,076	156,683	911,584	101,635	1,044,372	34,007	439,778	1,131,844	9,238,306	1929
1930	12	352,194	4,890,921	3,712	18,486	64,234	237,123	122,691	1,240,876	29,775	407,912	572,606	6,795,318	1930
1931	18	83,728	1,316,348	705,580	2,486,377	55,189	177,000	76,025	569,699	28,359	293,022	948,881	4,842,446	1931
1932	10	78,319	897,006	1,677	5,779	146,151	381,116	60,740	330,385	24,024	168,625	310,911	1,782,912	1932
1933	19	125,738	1,340,000	543,340	2,643,528	37,039	171,742	44,568	292,684	21,091	221,776	771,776	4,669,910	1933
1934	21	340,787	3,632,587	3,296	17,331	72,841	251,991	69,080	517,901	14,089	74,024	500,093	4,493,834	1934
1935	14	51,714	720,076	369,620	1,652,161	15,636	68,402	70,514	534,956	9,243	91,396	516,727	3,066,991	1935
1936	9	60,063	813,510	1,152	7,598	86,070	315,465	30,568	292,528	4,708	43,427	182,561	1,472,528	1936
1937	13	56,983	925,160	327,973	1,676,692	18,759	91,696	31,747	323,976	6,412	76,750	441,874	3,094,274	1937
1938	13	139,152	1,824,396	455	2,641	7,697	32,193	10,268	100,753	2,371	36,800	159,943	1,996,783	1938
1939	14	43,561	669,202	282,271	1,574,317	15,080	76,786	54,905	485,760	2,446	33,508	398,263	2,839,573	1939
1940	9	62,748	1,122,684	2,947	17,432	23,405	114,798	30,654	231,878	1,674	15,734	121,428	1,502,526	1940
1941	9	110,758	2,140,457	153,924	1,203,657	25,423	187,224	46,213	553,230	4,769	62,354	341,087	4,146,922	1941
1942	10	258,488	5,255,888	851	7,965	2,223	17,748	6,862	97,693	1,204	26,389	269,628	5,405,683	1942
1943	10	19,149	424,339	62,129	637,730	243	2,432	26,292	390,847	2,864	12,456	110,677	1,467,804	1943
1944	3	37,214	830,719	299	3,313	...	...	373	5,883	1,064	21,240	38,950	861,155	1944
1945	6	53,532	1,176,467	305,245	2,724,176	1,184	12,467	18,802	258,076	3,639	63,511	382,402	4,234,697	1945
1946	20	271,311	10,108,350	91	2,184	47,099	989,079	7,118	163,714	6,841	268,120	332,460	11,531,447	1946
1947	25	7,516	315,956	639,426	13,423,416	139,131	2,532,194	79,450	2,254,404	29,143	875,098	894,666	19,401,068	1947
1948	22	91,268	5,005,792	4,645	128,328	245,133	5,558,820	70,659	2,049,606	27,043	903,578	438,748	13,646,124	1948
1949	23	94,627	2,959,425	557,740	9,305,100	162,532	2,381,000	55,910	1,273,000	8,594	224,000	879,403	16,142,525	1949
1950	20	128,385	4,984,208	2,277	61,855	512,997	10,752,172	116,655	3,454,279	8,215	191,712	768,529	19,444,226	1950
1951	25	156,461	5,815,837	441,605	9,419,295	233,468	3,922,457	88,511	2,200,801	11,275	281,794	931,320	21,640,184	1951
1952	20	122,709	5,153,778	2,635	51,026	311,509	5,147,662	168,297	4,079,424	6,673	178,654	611,823	14,610,544	1952
Aver.	17	98,217	3,677,487	201,509	3,575,642	165,330	3,129,828	63,207	1,613,003	10,535	302,016	538,898	12,297,977	Aver.

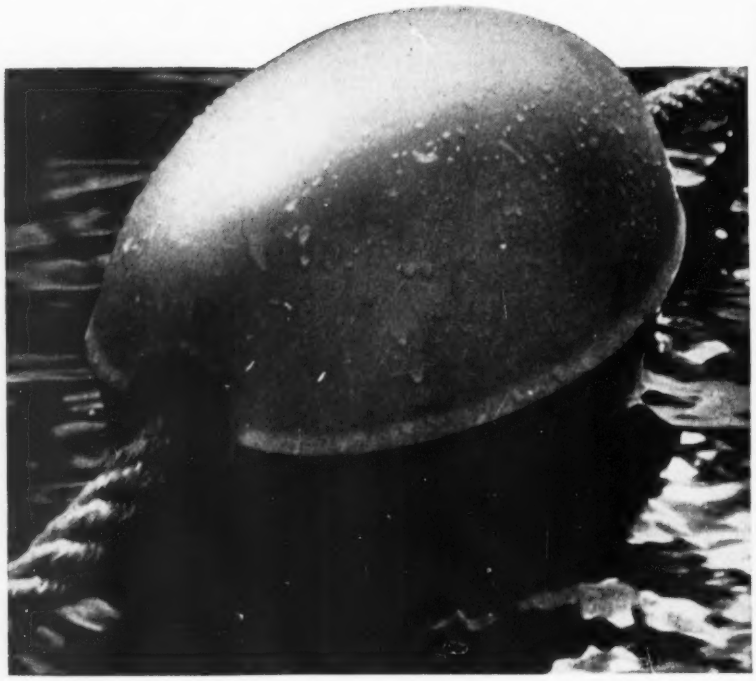
NOTE: — Figures for the last year in this table are from "Pacific Fisherman's" compilation. Those for previous years have been revised from official data.

Landings of Fish on the Oregon Side of the Columbia River

November 1951 — October 1952

MONTH	SALMON					STURGEON		SMELT	SHAD	TOTAL Poundage
	Chinook	Steelhead	Blueback	Silver	Chum	White	Green			
November 1951	971	12,406	...	104,214	165,737	6,913	...	...	...	290,241
December	...	90	...	141	629	241	...	...	...	1,101
January 1952	110	2,006	...	...	...	1,709	...	2,378	...	6,203
February	107,105	69,297	...	77	40	19,312	...	302,695	7	498,533
March	2,123	1,233	...	...	...	362	...	159,658	...	163,376
April	25,609	70	...	...	...	195	...	...	...	25,874
May	1,536,267	15,948	...	...	...	35,324	1,623	...	38,483	1,627,645
June	216,502	128,200	332,670	...	...	7,911	1,451	...	104,076	790,810
July	218,338	483,477	134,997	9	...	20,259	3,763	...	8,387	869,230
August	385,837	185,617	45	49	...	21,045	7,504	...	...	600,097
September	1,690,366	227,894	...	161,403	135	22,984	1,214	...	31	2,104,029
October	89,528	39,650	...	348,851	63,923	20,826	145	...	40	562,963
Totals	4,272,756	1,165,888	467,712	614,744	230,464	157,081	15,700	464,731	151,026	7,540,102

Note:-Data does not include ocean-caught fish.



Tough! Trouble-free! Buoyant!

NEW SPONGEX SEINE FLOATS

of cellular plastic

Several Pacific fishing fleets tested a new plastic seine float during the past season. Reports coming in confirm that this new float—the Spongex float—sets a new high in performance.

Molded of cellular plastic, these floats are easier to handle and have greater buoyance. Their design and smooth surface helps eliminate tangling on line and nets. They do not absorb water, they never need drying out. Even a puncture does not affect buoyancy.

Compressed under 25 ton pressure, the float returns to shape undamaged a few minutes after pressure is released. The smooth plastic surface needs no cover or protective finish. They won't rot or crumble.

One Spongex float can do the job of three regular type floats. Each ounce of the Spongex float supports 9½ ounces. And buoyancy remains constant, since this new float won't become waterlogged.

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and Savier Street
Portland 9, Oregon

THE SPONGE RUBBER PRODUCTS COMPANY
695 DERBY PLACE, SHELTON, CONNECTICUT

SPONGEX

1952 - COLUMBIA RIVER CANNED SALMON PACK - 1952

	COMPANY	CANNERY LOCATION	CHINOOK					SILVERSIDE		Blue-black	CHUM	STEELHEAD TROUT		GRAND TOTAL (Full Cases)	
			Fancy			Choice, Standard & Pale									
			1-lb. Flats & Ovals	½-lb. Flats & ovals (8 doz.)	¼-lb. Flats & ovals (48-lbs.)	Total	1-lb. Talls Flats, & Ovals	½ & ¼-lb. Flats (48-lbs.)	Total	1-lb. talls	½ & ¼-lb. Flats (48-lbs.)	TOTAL	½ & ¼-lb. Flats (48-lbs.)	All Sizes# (48-lbs.)	1-lb. Talls & Flats	½ & ¼-lb. Flats (48-lbs.)	TOTAL	
1	Barbey Packing Corp.	Astoria, Ore.	...	4,858	...	4,858	...	958	958	...	914	914	389	1,125	...	1,046	1,046	9,290	1
2	Chinook Packing Co.	Chinook, Wash.	...	2,361	...	2,361	...	548	548	...	1,881	1,881	425	1,011	...	...	...	6,226	2
3	Columbia River Packers Assn.	Astoria, Ore.	414	17,534	7,418	25,366	(11)3,345	(2)10,788	14,133	914	(3)18,337	19,251	(4)2,114	1,360	131	(5)6,539	6,670	66,894	3
4	Keystone Packing Co.	Ilwaco, Wash.	...	5,231	413	5,644	2,689	(6) 2,371	5,060	...	(7) 1,419	1,419	(8)1,608	(9)3,011	...	...	...	16,742	4
5	New England Fish Co.	Chinook, Wash.	...	2,143	...	2,143	...	513	513	...	...	...	526	...	(14) ...	...	...	3,182	5
6	Point Adams Packing Co.	Hammond, Ore.	121	5,555	1,592	7,268	(10)1,126	(11)4,276	5,402	360	(12)3,862	4,222	2,113	2,256	(15)1,577	2,759	24,020	6
7	Portland Fish Co.	Portland, Ore.	...	3,949	...	3,949	...	482	482	...	276	276	593	475	...	3,540	3,540	9,315	7
8	San Juan Fishing & Packing Co.	Warrenton, Ore.	...	...	...	...	...	...	...	...	...	...	...	...	(16) 277	...	...	277	8
9	Seufert Brothers Co.	The Dalles, Ore.	1,014	961	...	1,975	(17)1,470	540	2,010	...	...	...	214	474	1,101	1,347	2,448	7,121	9
10	Union Fishermen's Co-Op. Pkg. Co.	Astoria, Ore.	759	5,437	2,812	9,008	(18) 545	(19)2,546	3,091	780	(20)1,319	2,099	(21)2,211	1,052	(14)952	(22)1,565	2,517	19,978	10
	Total		2,308	48,029	12,235	62,572	9,175	23,022	32,197	2,054	28,008	30,062	10,336	10,898	3,366	15,614	18,980	165,045	

NOTE:- Unless otherwise noted, figures for Bluebacks represent Halves (basis of 8 dozen); for Chums, 1-lb. Talls, What few Ovals were canned are included with Talls or Flats of the respective sizes, without segregation. Quarters (basis of 48 lbs.) are include with Halves or other styles, as follows: (1) 148 cases; (2) 1,871 cases; (3) 8,790 cases; (4) 199 cases; (5) 2,225 cases; (6) 8,951 cases; (7) 34 cases; (8) 1,044 cases; (11) 122 cases; (12) 1,498 cases; (13) 595 cases; (15) 1,194 cases; (19) 187 cases; (20) All Quarters; (21) 1,095 cases; (22) 381 cases. One-pound Flats and Ovals are included with other styles, as follows: Halves (basis of 8 dozen) are included with other sizes, as follows: (9) 38 cases; (16) All Halves,

SALMON
COLUMBIA RIVER

OUTSTANDING feature of the Columbia River salmon season of 1952 lay not in the run nor in the pack, but rather in the fact that the industry — fishermen and packers alike—chose to waive the entire August run.

The fishermen insisted that there would be no fishing unless the packers signed a contract which stipulated that the fishermen were in fact "employes" of the operators. The packers declared that they could not do this without violating the law, inasmuch as the courts have held that independent fishermen selling the product of their craft to buyers are not, and cannot become, employes of the buyers.

The local court enjoined the union from picketing under the circumstances; whereupon the fishermen "abstained" from fishing for the balance of the summer season.

Effect of the strike on the catch was demonstrated by the number of salmon counted over the fishways at the Bonneville Dam. The upstream migration at the dam in August, 1952, was far greater than that of any previous August since the dam was completed and counting commenced in 1938. A substantial part of this increased escapement, of course, was caught by the Indian fishermen at Celilo.

COLUMBIA RIVER CANNED SALMON PACK

Salmon canning on the Columbia River commenced in 1866, with a pack of about 4,000 cases valued at $64,000; but no segregation by species is available prior to 1889. Production increased rapidly to a peak of 629,400 cases in 1883, valued at $3,147,000; then fell to 356,000, valued at $2,124,000, in 1887; the average output for intervening years being 351,091 cases, valued at $2,066,227.

YEAR	# of Canneries	CHINOOK		BLUEBACK		SILVERSIDE		CHUM or KETA		STEELHEAD TROUT		TOTAL		YEAR
		Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value	
1888	28	...	...	...	...	...	...	...	...	...	...	372,477	$2,234,862	1888
1889	21	266,697	$1,600,182	17,797	$101,051	...	...	...	...	25,391	$108,587	309,885	1,809,820	1889
1890	21	335,604	1,946,087	57,345	290,069	...	...	...	...	42,825	171,300	435,774	2,407,456	1890
1891	22	353,907	2,038,566	15,482	284,242	...	...	...	...	29,564	118,156	398,953	2,440,964	1891
1892	24	344,267	1,996,388	66,547	372,909	4,176	$20,880	...	...	72,348	288,892	487,338	2,679,069	1892
1893	24	288,773	1,559,374	30,459	152,295	29,107	116,428	2,311	$6,933	65,226	260,904	415,876	2,095,934	1893
1894	24	351,106	1,896,976	43,814	224,430	42,758	171,032	...	...	52,422	209,688	490,100	2,501,126	1894
1895	24	444,909	2,428,658	18,015	86,523	99,601	329,683	22,493	62,591	49,678	203,542	634,696	3,110,997	1895
1896	24	370,943	1,804,511	16,983	81,518	44,108	141,145	...	...	49,663	198,652	481,697	2,261,826	1896
1897	22	432,753	1,804,221	12,972	51,888	60,850	197,762	...	...	46,146	165,440	552,721	2,219,311	1897
1898	23	329,566	1,490,394	66,670	300,015	65,431	222,465	...	...	26,277	60,352	487,933	2,073,226	1898
1899	17	255,824	1,458,175	23,969	134,723	29,608	112,055	11,379	33,836	11,994	39,186	332,774	1,777,975	1899
1900	16	262,392	1,821,258	13,162	92,184	44,925	202,163	17,696	63,706	20,597	102,985	358,772	2,282,296	1900
1901	...	...	...	...	...	...	...	...	...	...	...	390,183	1,942,660	1901
1902	14	270,580	1,428,743	17,037	86,465	10,532	44,732	10,401	41,604	8,593	42,965	317,143	1,644,509	1902
1903	16	301,762	1,610,614	8,383	42,867	12,181	49,869	10,000	37,500	7,251	36,255	339,577	1,777,105	1903
1904	20	320,378	1,944,690	12,911	78,048	31,254	118,357	20,693	52,691	9,868	48,892	395,104	2,242,678	1904
1905	19	327,106	1,962,636	7,768	46,608	26,826	114,011	25,751	65,206	9,822	49,110	397,273	2,237,571	1905
1906	19	311,334	1,868,007	7,816	54,712	41,446	124,338	27,802	69,505	6,500	32,500	394,898	2,149,062	1906
1907	19	258,433	...	5,504	...	31,757	...	22,556	...	5,921	...	324,171	1,763,490	1907
1908	14	210,096	...	8,581	...	31,432	...	16,884	...	10,726	...	253,341	1,380,708	1908
1909	15	162,131	1,203,546	27,908	214,561	42,178	185,070	24,542	57,115	17,283	99,796	274,087	1,760,088	1909
1910	15	244,285	1,882,137	6,234	34,287	68,922	363,688	66,538	232,883	5,436	31,203	391,415	2,544,198	1910
1911	15	405,862	2,204,185	5,988	47,904	79,416	549,478	53,471	203,198	8,594	47,399	543,331	3,052,164	1911
1912	15	220,317	1,988,526	8,210	85,384	31,842	177,248	18,699	46,590	6,958	22,108	285,666	2,319,856	1912
1913	15	192,116	1,664,670	11,152	93,677	40,969	175,412	13,303	29,486	8,939	49,142	266,479	2,012,387	1913
1914	17	289,464	2,573,502	35,311	376,924	69,769	380,666	49,285	205,541	10,792	59,356	454,621	3,595,989	1914
1915	19	406,486	3,694,361	5,459	56,707	33,336	173,234	86,530	251,632	26,723	129,358	558,534	4,305,292	1915
1916	20	395,166	3,572,203	3,790	27,288	52,084	335,114	77,766	307,483	18,999	118,987	547,805	4,361,075	1916
1917	20	403,637	5,023,529	7,968	111,552	64,299	700,680	53,659	386,596	23,783	292,538	555,218	6,530,939	1917
1918	20	400,952	5,222,983	37,833	605,328	98,145	1,072,843	29,846	215,669	24,605	350,071	591,381	7,466,924	1918
1919	21	392,125	5,455,550	7,268	145,360	90,728	1,142,767	75,493	541,989	14,414	205,254	580,028	7,490,920	1919
1920	22	420,467	5,661,580	2,617	62,808	27,024	257,806	18,792	99,564	12,645	116,859	481,545	6,198,617	1920
1921	20	267,582	3,761,321	6,045	120,900	34,381	233,372	4,821	19,791	10,142	68,266	323,241	4,203,649	1921
1922	23	237,230	3,724,393	30,743	614,860	90,437	633,935	8,844	47,130	24,920	186,675	392,174	5,206,993	1922
1923	23	289,586	4,967,657	38,309	766,180	101,554	673,954	25,508	135,168	25,968	187,965	480,925	6,730,924	1923
1924	22	293,716	4,508,236	7,366	129,840	112,308	992,865	57,748	303,356	29,734	285,107	500,872	6,219,404	1924
1925	21	250,809	5,423,129	5,650	106,220	113,554	1,488,855	55,812	272,398	14,637	177,866	540,452	7,468,468	1925
1926	21	295,302	4,744,131	21,736	434,720	97,142	1,027,597	32,853	181,216	32,690	356,418	479,723	6,744,064	1926
1927	22	339,446	5,559,202	6,887	147,378	74,879	585,816	68,449	425,240	30,148	311,070	519,809	7,028,705	1927
1928	24	251,404	4,355,218	4,814	100,131	49,136	478,355	124,953	747,619	16,339	222,139	446,646	5,903,462	1928
1929	21	242,938	4,234,214	10,072	181,296	90,684	917,561	54,619	314,928	23,804	257,025	422,117	5,905,024	1929
1930	21	281,346	4,092,810	9,823	194,460	110,430	1,156,042	11,371	43,324	16,535	171,541	429,505	5,658,177	1930
1931	20	294,798	3,754,929	4,125	66,000	39,268	247,878	3,518	11,754	11,990	110,429	353,699	4,191,000	1931
1932	15	216,511	2,023,390	2,795	33,540	46,492	280,853	17,261	44,879	13,132	91,924	296,191	2,474,586	1932
1933	14	251,157	2,719,303	6,921	96,894	36,430	263,190	24,398	107,351	17,805	142,440	336,711	3,329,178	1933
1934	13	251,068	2,630,152	6,869	82,428	65,428	536,731	24,455	92,608	14,901	121,000	362,721	3,462,919	1934
1935	10	205,870	2,479,450	1,302	17,619	95,184	725,868	15,495	59,499	14,888	122,846	332,739	3,405,282	1935
1936	11	220,188	2,964,058	9,837	137,718	36,541	303,263	30,597	110,149	19,282	317,867	316,445	3,833,055	1936
1937	11	291,343	4,256,819	7,526	126,436	69,801	725,996	30,592	138,309	17,568	189,734	416,830	5,437,294	1937
1938	10	173,892	2,707,267	13,889	260,369	67,257	630,364	37,704	143,275	15,248	152,480	307,990	3,893,755	1938
1939	10	207,595	3,336,206	5,301	102,359	69,082	730,549	15,201	75,416	25,293	320,025	322,472	4,666,141	1939
1940	11	244,570	3,785,681	23,974	471,530	59,737	623,681	25,282	125,420	33,436	373,514	386,999	5,379,826	1940
1941	11	328,609	5,558,254	33,070	661,400	35,727	481,834	83,144	572,994	33,162	453,502	513,712	7,727,984	1941
1942	12	274,750	5,692,929	23,256	625,230	26,541	497,070	118,051	911,538	21,803	429,678	464,401	8,156,445	1942
1943	11	130,373	3,094,505	2,880	77,586	5,707	61,065	12,439	112,421	16,261	323,874	167,660	3,669,451	1943
1944	10	163,047	3,714,591	758	20,342	12,210	137,072	1,525	11,590	19,222	375,838	196,762	4,259,433	1944
1945	8	132,014	3,095,228	112	3,001	22,154	244,060	1,032	8,848	19,314	363,068	*175,670	3,723,456	1945
1946	11	159,872	5,940,740	9,726	369,588	6,883	206,490	†15,617	247,392	17,373	510,720	†209,471	7,274,939	1946
1947	10	250,318	8,613,000	15,079	664,000	42,789	1,278,000	17,121	252,000	21,999	650,000	347,306	11,457,000	1947
1948	12	235,310	9,342,000	3,339	147,000	39,425	1,099,000	26,201	498,000	19,977	615,000	324,242	11,701,000	1948
1949	12	133,347	3,682,000	** 6,630	225,000	16,740	415,000	12,386	186,000	9,019	221,000	178,122	4,729,000	1949
1950	11	136,635	4,964,201	3,630	146,687	29,507	939,296	12,952	234,457	10,266	360,830	192,990	6,645,471	1950
1951	10	143,046	5,497,305	4,552	186,243	29,099	841,234	11,566	192,850	14,862	469,615	203,125	7,187,547	1951
1952	9	94,769	3,593,934	10,336	434,112	30,062	841,736	10,898	174,368	18,980	569,400	165,045	5,613,550	1952
AVER.	10	157,873	5,153,750	5,704	227,385	23,457	606,295	12,174	191,792	16,727	445,935	216,039	6,626,085	AVER.

*Includes 1,044 cases of Pinks canned from Puget Sound fish.
†Includes 1,873 cases of Pinks canned from Puget Sound fish.
**Mostly Quinault River Bluebacks. The Average figures are for last 10 years.

SALMON
COASTAL AREAS

Despite the strike, the pack of the Columbia River was of exceptionally high quality and fair volume, the early fishing having been quite good—and it is then that quality is at its peak.

After losing the August run—always the heaviest of the year—the fishermen agreed to resume operations with the re-opening Sept. 10 and did so. Packers at that time offered 17c per lb. for bright Chinooks; 7c for "tule" Chinooks; and 16c for Silvers and Steelheads. Fishing went forward without contract.

Oregon and Washington coastal operations were definitely sketchy in 1952, with Oregon production being transported by fast refrigerated truck to the Columbia River for canning.

On the Washington coast the operations were largely confined to a little early canning of Quinault Sockeyes; followed of course, by the usual limited canning of fall Chums.

1952-CANNED SALMON PACK OF COASTAL AREAS-1952

	COMPANY	CANNERY LOCATION	CHINOOK 1-lb. Talls	CHINOOK ½-lb. Flats (48-lbs.)	CHINOOK Total (Full Cases)	Blueback or Sockeye ½-lb. Flats (8 doz)	SILVER or COHO 1-lb. Talls	SILVER or COHO ½ & ¼ lb. Flats (48-lbs)	SILVER or COHO Total (Full Cases)	CHUM 1-lb. Talls	GRAND TOTAL (Full Cases)	
	Washington											
1	Mohawk Packing Co.	Moclips	1,314	...	1,314	797	1,104	...	1,104	1,084	4,299	1
2	West Coast Fish Co.	Aberdeen	...	...	...	...	11	...	11	8,012	8,023	2
	Miscellaneous		...	...	...	80	(a)1,225	1,800	3,025	(b)3,725	6,830	
	TOTAL Washington Coast		1,314	...	1,314	877	2,340	1,800	4,140	12,821	19,152	
	Oregon											
1	Hallmark Fisheries	Charleston	...	150	150	...	...	150	150	...	300	1
2	Port Orford Fish Co.	Port Orford	...	34	34	...	...	11	11	...	45	2
3	Yaquina Bay Fish Co.	Newport	...	...	...	...	...	(c)850	850	...	850	3
	TOTAL Oregon Coast		...	184	184	...	...	1,011	1,011	...	1,195	
	TOTAL Washington & Oregon Coast		1,314	184	1,498	877	2,340	2,811	5,151	12,821	20,347	
	California											
	Tom Lazio Fish Co.	Eureka	...	304	304	...	...	399	399	...	703	
	TOTAL Coastal Areas		1,314	488	1,802	877	2,340	3,210	5,550	12,821	21,050	

NOTE -- These figures do not include salmon shipped from coastal points to Puget Sound or Columbia River canneries, which are included in the tabulations for those districts.

Some 4-lb. cans are included with 1-lb. Talls, as follows: (a) About 500 cases; (b) About 200 cases; (c) Quarter-pound cans, counted 48 lbs. to the case.

CANNED SALMON PACK OF COASTAL AREAS

Year	WASHINGTON Blueback	Chinook	Silver & Steelhead	Chum & Pink	Total Full Cases	OREGON Chinook	Silver & Steelhead	Chum	Total Full Cases	California TOTAL (Full Cases)	GRAND TOTAL Full Cases	Year
1919	1,244	5,029	17,174	39,995	63,442	26,089	43,114	7,081	76,284	22,766	162,492	1919
1920	235	921	405	26	1,587	30,571	4,490	. . .	35,061	21,055	57,703	1920
1921	2,590	2,010	4,897	5,281	14,778	15,632	122	. . .	15,754	10,376	40,908	1921
1922	26,491	2,573	13,354	10,939	53,357	12,270	11,769	2,248	26,287	9,700	89,344	1922
1923	10,454	1,794	5,172	38,523	55,943	10,526	22,606	14,279	47,411	6,000	109,354	1923
1924	6,778	1,506	5,493	32,760	46,537	16,351	30,449	14,603	61,403	12,936	120,876	1924
1925	4,821	3,810	6,679	35,342	53,276	22,404	18,872	14,410	55,686	22,339	131,301	1925
1926	2,720	2,441	3,182	17,377	25,720	19,130	7,033	4,838	31,001	11,537	68,258	1926
1927	5,260	4,195	1,983	25,452	36,890	17,456	13,390	181	48,619	15,585	101,094	1927
1928	2,000	52	415	34,109	37,031	5,411	8,136	5,500	19,047	4,237	60,515	1928
1929	4,449	213	1,158	35,699	41,519	4,700	2,313	8,047	15,060	2,774	59,353	1929
1930	21,536	49	2,160	11,846	35,519	11,252	981	. . .	12,233	5,171	52,995	1930
1931	8,476	61	501	11,225	20,263	4,234	. . .	8,600	12,834	12,280	45,377	1931
1932	14,263	308	1,152	22,236	37,959	8,524	. . .	. . .	8,524	780	47,263	1932
1933	6,754	845	424	7,735	15,758	7,150	. . .	500	7,650	2,149	25,557	1933
1934	3,323	2,344	1,453	15,370	22,490	4,100	. . .	2,000	6,100	820	29,410	1934
1935	6,217	3,685	10,009	7,351	27,262	2,500	. . .	2,400	4,900	874	33,036	1935
1936	705	1,137	1,883	16,038	19,763	. . .	. . .	9,500	9,500	. . .	29,263	1936
1937	2,865	176	82	7,932	11,055	2,400	. . .	. . .	2,400	147	13,602	1937
1938	1,559	. . .	. . .	13,173	14,732	. . .	. . .	. . .	. . .	. . .	14,732	1938
1939	. . .	. . .	. . .	6,381	6,381	. . .	. . .	2,200	2,200	. . .	8,581	1939
1940	138	23	504	9,142	9,807	647	643	1,000	2,290	. . .	12,097	1940
1941	24	. . .	. . .	27,428	27,452	1,000	2,500	5,400	8,900	1,125	37,477	1941
1942	1,235	. . .	. . .	17,492	18,727	1,450	200	9,000	10,650	. . .	29,377	1942
1943	. . .	100	402	5	507	1,038	. . .	. . .	1,038	767	2,312	1943
1944	. . .	750	161	132	1,043	1,961	2,567	. . .	4,528	864	6,435	1944
1945	. . .	4,005	2,096	5,287	11,388	. . .	. . .	. . .	. . .	2,755	14,143	1945
1946	3,694	2,398	5,185	17,225	28,502	16,104	4,806	663	21,573	5,034	55,109	1946
1947	12,450	3,014	13,023	10,060	38,547	7,383	8,379	. . .	15,762	13,917	68,226	1947
1948	4,021	1,805	12,060	8,642	26,528	7,553	7,052	. . .	14,605	11,681	52,814	1948
1949	7,577	419	3,856	6,285	18,137	827	55	. . .	882	. . .	19,019	1949
1950	3,969	2,755	8,034	12,902	27,660	3,190	4,817	. . .	8,007	1,801	35,667	1950
1951	2,643	1,495	4,161	12,597	20,896	500	50	. . .	550	707	22,153	1951
1952	877	1,314	4,140	12,821	19,152	184	1,011	. . .	1,195	703	21,050	1952
Aver.	3,523	1,805	5,312	8,650	19,236	3,874	2,874	66	6,880	4,560	29,693	Aver

NOTE: -- All figures indicate "Full Cases" on a common basis of 48 lbs. net, equivalent to 96 Halves or 192 Quarters; the bulk of the actual pack being in 1-lb. Talls and 1/2-lb. Flats.

For some previous years a few Puget Sound Pinks are included with Chums in the Washington Coast pack.

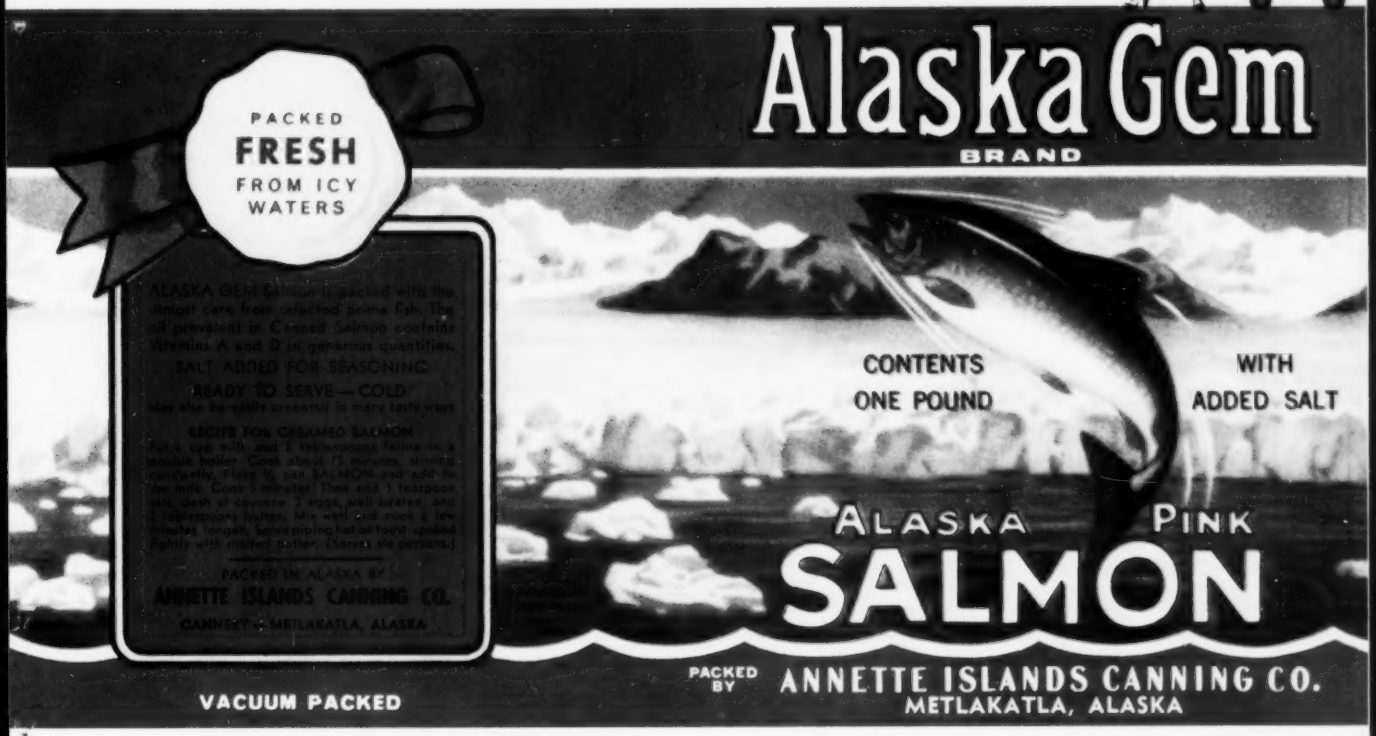
A few Steelheads are sometimes canned in these areas. Where they occur, they are included with Silvers.

The California pack consists almost entirely of Chinooks, but sometimes includes a few Silvers.

Average is for the last ten years.

This is the one for me!

SO RICH IN FLAVOR ... SO NATURALLY GOOD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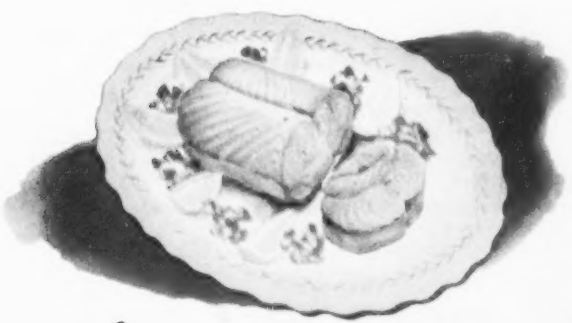
BRAND
PACKED
FRESH
FROM ICY
WATERS
ALASKA GEM Salmon is packed with the utmost care from selected prime fish. The oil prevalent in Canned Salmon contains Vitamins A and D in generous quantities.
SALT ADDED FOR SEASONING
READY TO SERVE — COLD
May also be easily creamed in many tasty ways
RECIPE FOR CREAMED SALMON
Put 4 cup milk and 2 tablespoons flour in a double boiler. Cook about 15 minutes, stirring constantly. Flake 1/2 can SALMON and add to the milk. Cook 5 minutes. Then add 1 teaspoon salt, dash of cayenne, 2 eggs, well-beaten, and 2 tablespoons butter. Mix well and cook a few minutes longer. Serve piping hot on toast spread lightly with melted butter. (Serves six persons.)
PACKED IN ALASKA BY
ANNETTE ISLANDS CANNING CO.
CANNERY — METLAKATLA, ALASKA
CONTENTS
ONE POUND
WITH
ADDED SALT
ALASKA PINK
SALMON
VACUUM PACKED
PACKED BY ANNETTE ISLANDS CANNING CO.
METLAKATLA, ALASKA

A Favorite in the Most Discriminating Markets

There's good reason for the popularity of Alaska Gem and other salmon canned by Annette. Our cannery, ideally located adjacent to fishing grounds, is always assured a supply of fine, prime ocean-caught fish . . . salmon that are naturally best . . . fresh-caught and canned while at their best. Particular pride is taken, too, in handling and processing, in the cleanliness and sanitation of our modern cannery, one of the showplaces of Alaska. All to safeguard the quality that is our reputation. This same fine quality product is also available to the trade unlabeled, for private brand labeling.



Annette Islands
CANNING COMPANY

METLAKATLA, ALASKA

Packers of
RED, COHOE, PINK and CHUM SALMON

COLMAN BLDG., SEATTLE 4, WASH.

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In wire rope, too, the right kind of muscle is mighty important . . . because different uses present different problems of wear and tear. Bending fatigue. Abrasion. Shock stress. Load strain. Each requires wire rope with the right construction and lay; the right grade of steel and size of wire to best withstand the destructive forces encountered.

Complete quality control from ore to finished rope; long experience and specialized know-how—these are your assurance that in Wickwire Rope you always get the proper combination of physical properties for long-lasting, reliable service on your particular job.

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9516

SALMON
CANADA

Economic crises resulting from loss of overseas markets adversely affected the Canadian salmon industry in 1952 and resulted in strikes which greatly curtailed production despite the availability of an exceptionally large run of fish.

DESPITE unfavorable circumstances, 1952 production of salmon in British Columbia was gratifying, particularly the year's renewed indication of the return to greatness of the Fraser River system as a source of Sockeyes.

During the time the fishermen were active and the canneries were operating, conditions in the industry were generally satisfactory; but it was a confusing and frustrating season, for it was marked by a continuing clash of forces resulting primarily from the decline in the export market for canned salmon. This led to determination on the part of canners to bring their costs of production to a level at which they could sell their product; and this was countered by reluctance of the fishermen to accept the lower prices offered for their catch in the face of rising expenditures.

The 1952 season will therefore be remembered as one of extensive economic adjustment and turmoil. The process was not a painless one; in fact, it culminated in a 42-day strike, longest in the industry's experience, when fishermen tied up their vessels

BRITISH COLUMBIA CANNED SALMON PACK

YEAR	Sockeyes Fraser River	Sockeyes Other Districts	Total Sockeyes	Springs	Cohoes & Bluebacks	Steelheads	Pinks	Chums	TOTAL Cases	YEAR
1903	204,809	163,908	368,717	25,657	51,918	....	27,382	....	473,674	1903
1904	72,688	250,536	323,226	38,675	66,351	....	....	37,642	465,894	1904
1905	837,489	243,184	1,080,673	28,359	44,458	....	13,970	....	1,167,460	1905
1906	183,007	276,672	459,679	32,344	69,132	....	68,035	....	629,460	1906
1907	59,815	254,259	314,074	26,098	87,900	683	118,704	....	547,459	1907
1908	63,126	291,897	355,023	28,164	81,917	1,137	76,448	....	542,689	1908
1909	542,248	298,193	840,441	19,017	61,918	....	46,544	....	967,920	1909
1910	133,045	432,870	565,915	28,789	74,382	140	34,613	58,362	762,201	1910
1911	58,487	325,022	383,509	48,456	119,702	100	305,247	91,951	948,965	1911
1912	108,784	335,778	444,762	80,437	165,102	207	247,743	58,325	996,576	1912
1913	684,596	287,582	972,178	41,049	69,822	....	192,887	77,965	1,353,901	1913
1914	185,483	351,213	536,696	49,328	120,201	....	220,340	184,474	1,111,039	1914
1915	89,040	387,002	476,042	58,104	146,956	2,927	367,352	82,000	1,133,381	1915
1916	27,394	187,395	214,789	66,726	183,623	9,982	280,644	240,201	995,065	1916
1917	123,614	116,234	339,848	76,276	157,589	11,740	496,749	475,273	1,497,475	1917
1918	16,849	259,610	276,459	107,354	191,068	15,916	527,745	497,615	1,616,157	1918
1919	29,628	339,817	369,445	100,551	199,993	4,493	346,639	372,035	1,393,156	1919
1920	44,598	306,807	351,405	118,301	120,033	2,395	520,856	84,626	1,187,616	1920
1921	35,900	128,014	163,914	49,752	124,348	1,220	192,906	71,408	603,548	1921
1922	48,744	250,870	299,614	39,596	109,276	1,657	581,979	258,204	1,290,326	1922
1923	29,423	305,224	334,647	27,142	119,141	1,760	440,932	418,055	1,341,677	1923
1924	36,200	333,403	369,603	27,456	119,989	1,811	657,538	568,916	1,745,313	1924
1925	31,523	361,120	392,643	73,499	199,180	1,996	445,400	607,904	1,720,622	1925
1926	83,589	253,406	336,995	69,189	181,894	2,165	772,993	701,962	2,065,198	1926
1927	57,085	250,947	308,032	58,977	181,968	1,746	247,617	562,109	1,360,449	1927
1928	26,530	177,011	203,541	18,856	156,757	865	792,362	863,256	2,035,637	1928
1929	60,407	220,899	281,306	19,377	196,444	672	477,969	424,982	1,400,750	1929
1930	107,896	369,782	477,678	38,804	190,594	1,656	1,111,937	401,114	2,221,783	1930
1931	54,688	236,776	291,464	27,147	102,175	1,326	206,995	55,997	685,104	1931
1932	83,447	200,908	284,355	76,060	188,971	1,168	223,716	306,761	1,081,031	1932
1933	53,481	204,626	258,107	20,266	159,052	1,459	532,558	293,630	1,265,072	1933
1934	145,579	232,303	377,882	29,784	225,430	1,282	435,364	513,184	1,582,926	1934
1935	76,415	274,029	350,444	21,920	231,492	596	514,966	409,604	1,529,022	1935
1936	165,651	249,373	415,024	29,854	246,061	1,068	591,532	597,487	1,881,026	1936
1937	103,137	222,637	325,774	16,171	133,208	844	585,576	447,602	1,509,175	1937
1938	186,794	260,659	447,453	15,531	301,123	1,035	400,876	541,812	1,707,830	1938
1939	73,216	196,672	269,888	16,103	245,096	797	620,602	386,584	1,539,070	1939
1940	86,215	280,188	366,403	17,741	224,524	1,205	213,911	643,443	1,467,227	1940
1941	149,715	305,582	455,297	50,476	391,407	3,454	427,766	920,470	2,248,870	1941
1942	418,491	248,080	666,571	24,745	211,139	4,649	270,622	633,834	1,811,560	1942
1943	72,507	92,382	164,889	10,658	186,042	3,095	530,188	363,348	1,258,221	1943
1944	107,431	140,283	247,714	19,362	183,546	3,926	389,692	255,316	1,097,557	1944
1945	122,384	205,617	329,001	12,800	218,887	2,922	825,512	350,188	1,739,311	1945
1946	381,580	161,447	543,027	8,100	100,154	4,115	116,607	576,133	1,348,138	1946
1947*	91,238	195,259	286,497	10,017	146,293	3,268	600,787	486,615	1,533,478	1947
1948	83,986	176,656	260,642	16,436	207,116	5,665	321,721	496,553	1,308,137	1948
1949	116,171	143,649	259,821	21,163	215,376	2,374	709,992	227,737	1,436,464	1949
1950	239,333	168,708	408,041	9,133	116,642	3,243	446,516	498,984	1,482,560	1950
1951	**260,258**	**168,041**	**428,299**	**13,698**	**312,845**	**3,656**	**736,093**	**461,806**	**1,956,397**	**1951**
1952	**213,408**	**235,766**	**449,174**	**9,064**	**64,095**	**3,752**	**675,836**	**84,547**	**1,286,468**	**1952**
10 YEAR AVER.	168,830	168,780	337,702	13,037	175,190	3,600	535,235	380,016	1,444,673	10 YEAR AVER.

NOTE: — Figures for 1925 to 1951 have been corrected from official statistics. Figures for 1952 are subject to further correction. Figures for "Fraser River Sockeyes" include all Sockeyes canned in District No. 1, regardless where caught.

* Figures for 1947 include 28,321 cases packed from frozen fish of 1946 catch of various species.

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If You Sell COHOE SALMON You are Benefitting from the Advertising of

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Because That Advertising Improves the Market for COHOE SALMON

•

During the past three summers, Advertising Campaigns on Red Breast Cohoe Salmon have been beamed at the great Metropolitan New York market by that nationally famous radio personality . . .

MARY MARGARET McBRIDE

and Sponsored by . . .

F. A. GOSSE COMPANY

1800 Exchange Bldg. MA 0475 Seattle 4, Washington

FOR CONSUMERS—
IN THREE ECONOMY SIZES
¼'s for single servings
½'s for couples
1 #'s for large families.

Established 1919

1952 - BRITISH COLUMBIA CANNED SALMON PACK - 1952

	# Canneries	(Cases) Sockeye	Springs	Steelheads	Bluebacks	Coho	Pinks	Chums	TOTAL
District No. 1 (FRASER RIVER & HOWE SOUND)									
Anglo-B.C. Packing Co., Ltd. - "Phoenix" British Columbia Packers, Ltd. - "Imperial" Canadian Fishing Co., Ltd. - "Home" Colonial Packers, Ltd. - "Colonial" Great West Packing Co., Ltd. - "Great West" Johnston Fishing & Packing Co., Ltd. - "Glen Rose" Francis Millerd & Co., Ltd. - "Great Northern" National Fisheries, Ltd. - "National" Nelson Bros. Fisheries, Ltd. - "St. Mungo" Queen Charlotte Fisheries, Ltd. - "Bidwell" Tulloch Fisheries, Ltd. - "Tulloch"	11	213,408	4,078	404	5,581	27,051	183,396	34,510	468,428
District No. 2 (SKEENA & NAAS AREAS)									
Anglo-B.C. Packing Co., Ltd. - "North Pacific" British Columbia Packers, Ltd. - "Sunnyside" Cassiar Packing Co., Ltd. - "Cassiar" Canadian Fishing Co., Ltd. - "Prince Rupert" Nelson Bros. Fisheries, Ltd. - "Port Edward"	5	150,912	3,329	2,522	...	20,142	358,795	30,149	565,849
District No. 2 (CENTRAL AREAS, etc.)									
British Columbia Packers, Ltd. - "Namu" Canadian Fishing Co., Ltd. - "Goose Bay" J. H. Todd & Sons, Ltd. - "Klemtu"	3	84,854	1,657	826	...	11,321	133,645	19,888	252,191
(No operation in District No. 3 in 1952)									
TOTAL	19	449,174	9,064	3,752	5,581	58,514	675,836	84,547	1,286,468

NOTE: - Figures are preliminary statistics of the Canadian Fisheries Department and are subject to later correction.

Data as to quantities in can size not available. Figures are for full cases of 48 one-pound cans or equivalent, and represent salmon canned in the various districts, regardless of where caught.

September 7 rather than accept the offered 5½c a pound for Chums, which was about half the price they had received during the fall of 1951.

1952 Run Was Good, But Pack Was Small

Had the industry been able to concentrate on production throughout the season it might have rolled up a total similar to or greater than 1951's nicely balanced 1,955,000 cases instead of one of the smallest in recent years—about 1,290,000 cases. But, of course, there was no real incentive for a bumper catch in view of the restricted market for the pack; and one might be justified in asking what the industry would have done with a pack much larger than the one which actually materialized.

Nevertheless it was a tough year all around. The fishermen were discontented because, except in a few cases, they couldn't get the price they wanted; and stayed ashore during critical periods of the season when they could have made big catches had they been out at sea. The operators were harassed because, in addition to their market worries, they had to maintain their plants and equipment for a season of minimum use and, like the fishermen, spent a lot of their time in somewhat futile discussions over prices.

Yet the season, productionwise, started out auspiciously. By the end of August, even though they delayed the beginning of their operations, the 13,000 fishermen engaged in the salmon fishery had landed one of the largest catches in a decade. Sockeye gillnetters on the Naas River made unusually heavy hauls early in the season, and before the seasonal closure was applied the gillnetters and the few purse seiners active in that area had accounted for a quarter million Sockeyes. On the Skeena, limited to gillnets, upwards of 800 boats harvested a total of 1,269,000 Sockeyes. Rivers and Smiths Inlets had a combined season total of practically the same number of Sockeye, and the Fraser River Sockeye fishery came in

EXPORTS OF BRITISH COLUMBIA CANNED SALMON

YEAR	Unit	To United Kingdom Quantity	To United Kingdom Value	To All Countries Quantity	To All Countries Value
1933	Cases	225,508	$ 2,255,080	1,173,574	$ 9,244,557
1934	"	304,313	3,490,470	1,036,401	8,419,896
1935	"	412,333	4,387,222	1,205,427	9,347,379
1936	"	389,358	3,597,649	1,385,956	10,478,418
1937	"	393,458	3,798,818	1,165,184	7,518,120
1938	"	342,640	3,726,527	972,630	7,111,140
1939	Cwt.	48,104	768,636	104,150	1,347,796
1940	"	41,172	665,833	113,289	1,504,917
1941	"	389	10,288	77,478	1,095,282
1942	"	738,518	13,860,849	776,382	14,424,678
1943	"	555,922	11,605,958	591,243	12,110,563
1944	"	512,445	10,664,747	540,039	11,065,864
1945	"	398,532	9,447,916	596,140	11,789,788
1946	"	444,823	11,742,701	479,021	12,330,780
1947	"	185,088	4,482,175	368,143	9,759,051
1948	"	47,711	1,590,962	275,724	8,933,240
1949	"	229,903	7,081,556	414,259	11,923,924
1950	"	126,029	4,645,680	330,176	10,246,436
1951	"	166,197	6,542,185	321,796	11,550,633
1952*	"	12,058	379,053	161,108	4,546,556

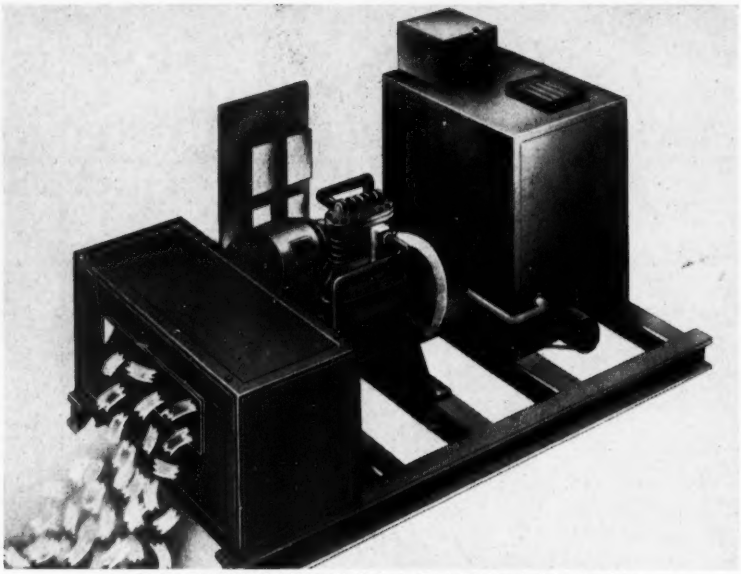
SOURCE: Victoria, B.C., Bureau of Economics and Statistics, External Trade Division.

*First nine months only.

York
refrigeration
air conditioning

FLAK-ICE EQUIPMENT

COMPLETE ICE PLANT
DESIGNED FOR THE
FISH PACKING INDUSTRY



4-ton Packaged YORK FLAK-ICE Unit, Including DER-25 FLAK-ICE Machine, 10-hp. Compressor Unit and Water Economizer*. (Optional.)

★ SIMPLE TO INSTALL—Requires only the connection of electric power and water for instant use.

★ DEPENDABLE—All major components, including compressor and ice making unit, manufactured and warranted by the York Corporation. Uniform factory production.

★ FULLY AUTOMATIC—Operation entirely automatic. Complete protection with automatic pressure and electric control devices.

★ TESTED — Completely sealed — tested — inspected — before shipment. Heavily crated to assure safe arrival.

★ SERVICED AND ADJUSTED—Annual service by Refrigeration Engineering Company factory-trained personnel.

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S & P SALES COMPANY

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EXPORTERS Cable Address: "ALGYERCO"

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Established 1912

Mutual Life Bldg. Mutual 1070 SEATTLE 4, U.S.A.

later with a catch of some 2,126,000 fish.

Canneries in the northern areas ceased operation at the end of August after conservation measures were made effective in Queen Charlotte waters because they had already put up an adequate pack and operators wished to avoid congestion in their storage houses, where unsold carryover from 1951 was still held.

Off-Year for Pinks Yields Good Catch

There was an abundance of Pinks in the central areas, although it was an "off" year for that grade on the Fraser. During a single day, 350,000 Pinks were taken in Masset Inlet by 85 purse seiners during the last week in August. The Skeena River run brought a second harvest to gillnetters, in spite of the fact that it had been generously tapped by the purse seine fleet in Ogden Channel. Between them, the two fleets took about 1,500,000 fish, and nearly 2,000,000 more fell to the seines in Masset Inlet and Naden Harbor, with an amazing run to the central and southern waters of Queen Charlotte Islands providing better than a million Pinks. Altogether, with Whales Channel, Bella Coola and Johnstone Strait contributing strongly, the total catch of Pinks exceeded 10,000,000 fish.

An unusually long dry spell which extended into late Fall adversely affected some of the spawning grounds. Some streams virtually dried up and fish milled about their entrance for weeks awaiting access to the spawning grounds. This was particularly true of Pinks and, recognizing the danger of over-fishing, the Department of Fisheries brought down several early closures that were terminated only by the advent of the rainy season.

On the Fraser River, the year's run was predominantly Chilko and it "crossed up" the experts by peaking in United States waters on July 25 and 26 instead of on July 31 and August 1, when it had been expected in accordance with past Chilco cycles. This was an unusual occurrence and studies are being made by the International Pacific Salmon Fisheries Commission to determine the biological significance of this change of pattern.

Chilko Sockeye apparently did not produce at its maximum rate in 1952, although the escapement in the previous cycle year had been the largest since 1909. The 1937 spawning at Chilko produced many more fish in 1941 than was produced in 1952 by the large 1948 escapement.

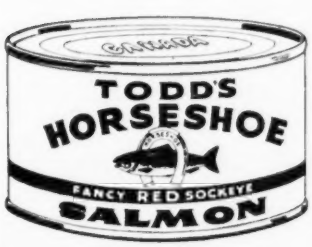
Another outstanding feature of the season was the unexpectedly large run of Sockeye to Gates Creek of the Seton-Anderson system. Only a few pair were observed in that creek in 1948, although an accurate enumeration was not attempted. In 1952, 6,883 spawners were counted and the size of the escapement was sufficient to place that early run producing area well on the road towards rehabilitation—another district to be added to the growing list of once important producers which were practically destroyed by the 1913 slide at Hell's Gate.

HORSESHOE BRAND FRESH SALMON
TRADE MARK REGISTERED

REGISTERED IN 1882!

... and still going strong

Canada's first salmon label, Todd's Horseshoe Brand Sockeye Salmon, was registered 71 years ago and is still today the hallmark of quality across Canada. For choice North Pacific salmon, write, wire or telephone J. H. Todd & Sons Ltd., Victoria B.C., Canada.



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Telephone: 7-3181, 7-3182
Territory: Connecticut and Western Massachusetts (eight salesmen)
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Cotton and Linen Netting Preservative
Proved By Use

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• You can NOW buy your cotton or linen netting already treated with the *improved* DURA-NETT at Nordby's. Why worry about your netting being BURNED? Why worry about suitable weather for drying it? Your worries are over when you buy DURA-NETT-Treated netting.

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young enough to try.

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Owners of
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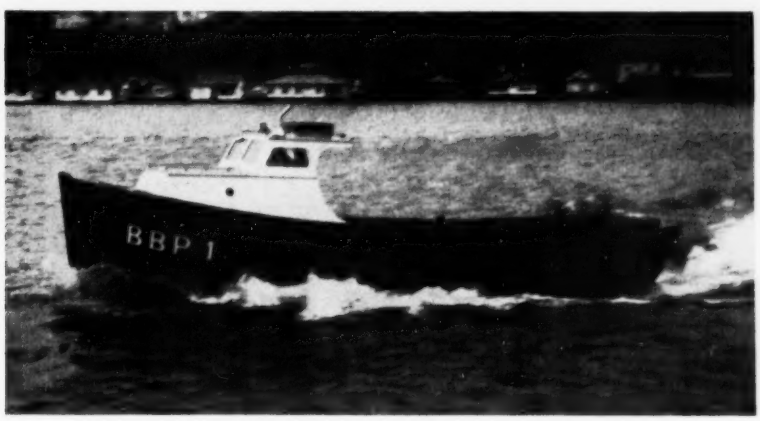
Pier 25, MA 0745
Seattle 4, Washington

GILLNETTERS
The Boats of the Year

Gillnetters, fishing the oldest form of nets, proved the dominant element in salmon fishing fleet development of 1952.

Commissioned by the hundreds in 1952 for the newly-opened power fishery of Bristol Bay, these gillnetters are the modern version of fishing craft whose beginnings antedate human history.

GILLNETTERS, fishing the oldest form of nets, and the most widely-used as well as the oldest, again in 1952 proved front-runners in importance, in interest, and in numbers in fishing fleet development of the Pacific Northwest and Alaska. Upwards of 700.



As in 1951, the opening of the Bristol Bay fishery to power craft gave sharp stimulus to gillnetter interest and building; but along with this Bristol Bay bulge there went the continuation of a trend which has been evident for years—toward the development of gillnetters big enough for high seas fishing, for ocean trips, and for ready conversion to salmon trolling, tuna jigging, crabbing, and jitney seining.

To the gillnetter again goes the palm for first place—and this is all the more notable because it is an ancient form of gear, and the modern version of one of the oldest forms of fishing vessels, which today is out in front.

New Craft and Conversions

Where 1951 Bristol Bay gillnetter building was featured by the activities of companies embarked on the freezership ventures, as they strove to get fishing fleets to supply their freezers, in 1952 greatest activity came from the long-established shore operators. These companies generally approached the problem from two points of view:

1. Creation of a nucleus of new boats, developed along the most generally accepted lines of design, equipment and arrangement; and with a view to fixing upon a type which could be standard for the company's later building.

2. Conversion of existing sail boats to power in order to employ the investment already standing in those boats; and at the same time to reduce the immediate outlay for power boats.

New Craft Characteristics

New gillnetters of 1952 generally were refinements of designs developed and tested in 1951. Most of them

Above—
Bryant-built Bristol Bay gillnetter for Bristol Bay Packing Co.

Right—
Notable in being a double-ender among many transome stern gillnetters, this Nakat Packing Corporation type was built by Maritime.
Both of these gillnet boats were powered with Chryslers.

Conversion of Bristol Bay gillnetters resulted in some interesting craft. Here is one of the notable ones — a sailboat with a rebuilt Norwegian stern, worked out by Bristol Bay Packing Co. and powered with a Gray "Alaska Lugger."

were single-enders with transom sterns; and nearly all were stern-pickers. Lines of the several models, and particularly sheer and freeboard, varied considerably between the products of the several designers and yards. Another point of variation was in the type and arrangement of the operating station and the closely-compact living quarters, with which is usually combined the engine shelter.

There were exceptions, however. For example, the Nakat Packing Corporation favored the double-ender, and came through the season strong in its faith in this form of hull as the most seaworthy and safest under Bristol Bay operating conditions.

A few bow-pickers were listed among the new vessels also—generally at the demand of high-line fishermen who favor this arrangement for net-handling.

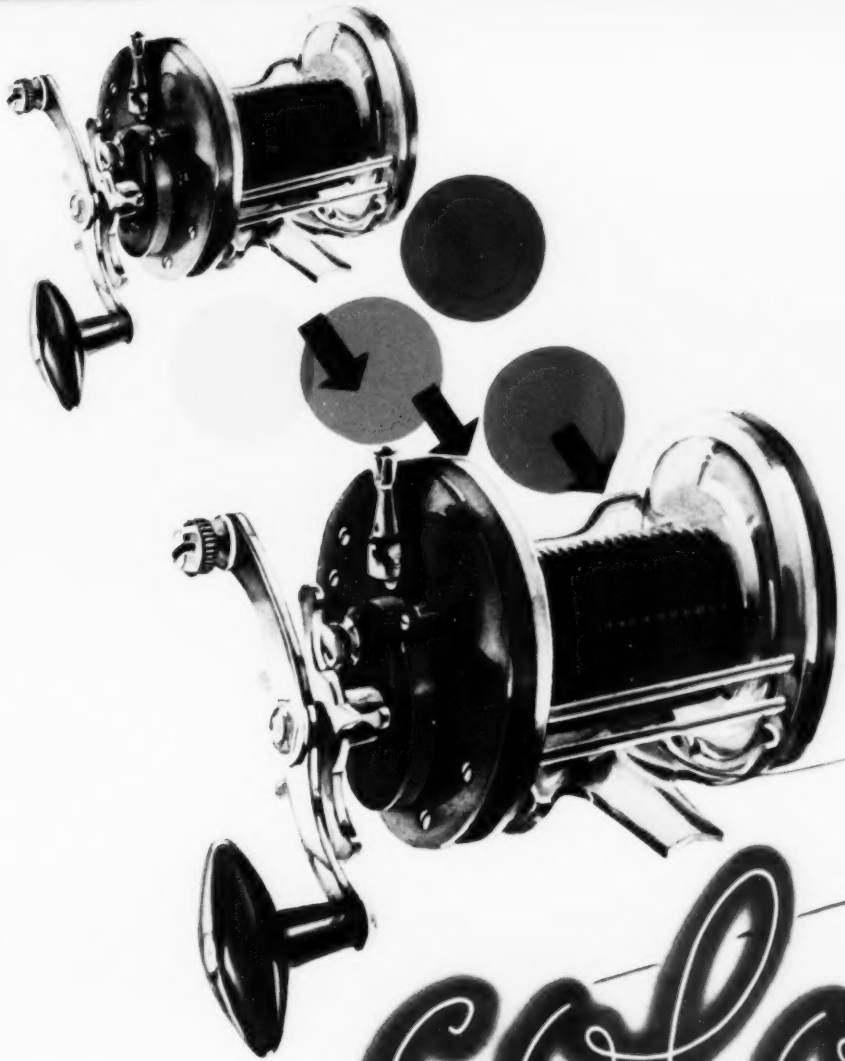
Ingenious Conversions

In the field of conversion there was opportunity for builders to exercise their ingenuity widely. Desirability of doing as much of the work as possible in the North; and of taking up prefabricated structures for the change exerted large influence upon the various conversion programs.

Several of the companies put their faith in steel stern units, including skeg, stern bearing and stuffing box, rudder shoe, etc. The pre-fabricated steel units were designed to fit a notch sawed out of the stern of the

Above—
Steel gillnetter built by Flohr & Co. and Chris-Craft powered.

Left—
Jitney seiners for Kodiak can also work gillnets on Cook Inlet. Monk - designed and Lathrop-powered, these 36 footers were Grandy-built for the late O. L. Grimes. They went north under their own power.



color sells

catches the customer

WESTERN *Lithograph Company*

600 EAST SECOND STREET • LOS ANGELES 54, CALIFORNIA

SAN FRANCISCO • SAN DIEGO • SEATTLE • FRESNO • HOUSTON • McALLEN

New gillnetters went north by the shipload in 1952. Here is the *Square Sinnet* taking 52 gillnetters aboard. In the foreground may be discerned several of the Red Salmon Company's Nordberg-powered fleet built by Sagstad.

old-type Bristol Bay sail boat, being bolted to the wooden hull through gasket material. The centerboard trunk was removed, the well stopped and the engine generally seated on timbers at the forward end of the former centerboard case. A small housing forward was often added for comfort.

In other cases wooden sterns were rebuilt with pre-cut members taken North for ready-fitting, the old sterns being cut-out for about five frames at the keel, dropping back one frame for each strake to give a staggered joining. This permitted a well-shaped run to the wheel and a symmetrical stern whose hybrid origins could scarcely be detected.

This opening of the Bristol Bay fishery to power has seen interesting extension of the already considerable use of outboard motors in the commercial fisheries. While hundreds of these motors have been employed in the Alaska salmon operations for utility service, in-port transportation, trap service and set-net tending, it remained for the Bristol Bay power order to open a greatly expanded field for the outboard.

A number of conversions were worked-out on the basis of a well being built into the stern of a former sailboat, with a long-shaft outboard installed for power. In other cases fishermen attached their outboards by vertical-opening clamps to the former rudder stocks of their boats.

Development of the gillnet fishery on Cook Inlet, largely based on the seasonal influx of fishing vessels from other districts, notably Kodiak Island and the Copper River, has put something of a premium on the ocean-going gillnetter with the ability to brave Shelikof Strait or the run across Prince William Sound and around Kenai.

These boats generally are patterned after some of the more capable gillnetters of the Fraser River and Puget Sound, and indeed often are transplanted Puget Sounders, or boats actually run north for the season.

They may include gillnet reels in their equipment; and many of them will carry two-way radiophones. These craft are as large as small trollers or crab boats, and convert to those trades in a day or two.

MARKETS
SALMON

Struggle to sell above cost, but yet below "consumer ceilings"—the theoretical price levels above which retail buying atrophies—marked the canned salmon market patter of 1952.

The problem was complicated by short packs, which sent costs rocketing above anticipated peaks; and by the salmon surplus in Canada, resulting from shrinkage of overseas markets.

PINK salmon was the only variety in more than nominal supply as 1952 opened, and talls were widely quoted at $21, although it is altogether probable that they could have been had at $20.50, or even $20, almost any day after 1952 began.

Consigned Stocks Prove Element of Weakness

As spring progressed there was some weakening in the way of secret sales, although no open quotations under $20 were made through Lent.

During this period the retail trade and the field brokers were reporting consumer revulsion from the necessary selling prices of $21 Pinks.

One element of weakness in the salmon situation early in 1952 lay in the extraordinary extension of the consignment system. While consignments —like the Poor—are always with us, the number and volume only now and then become threatening. This condition did develop in the late winter and early spring of 1952, when consignments proliferated to the point where they constituted a major weakness in the salmon structure.

Pink Prices Dropped To Win Retail Sales

Late April brought a sudden readjustment of the Pink price to $18, evidently in an effort to get the product to the consumer at less than 50c per one-pound tin; and thus to bring about actual consumer sales in satisfactory volume.

Not all Pinks were offered at this price, although some of the larger stocks were cleaned up quickly at $18; and it is believed that all the consignments thickly distributed throughout the country were offered on this basis.

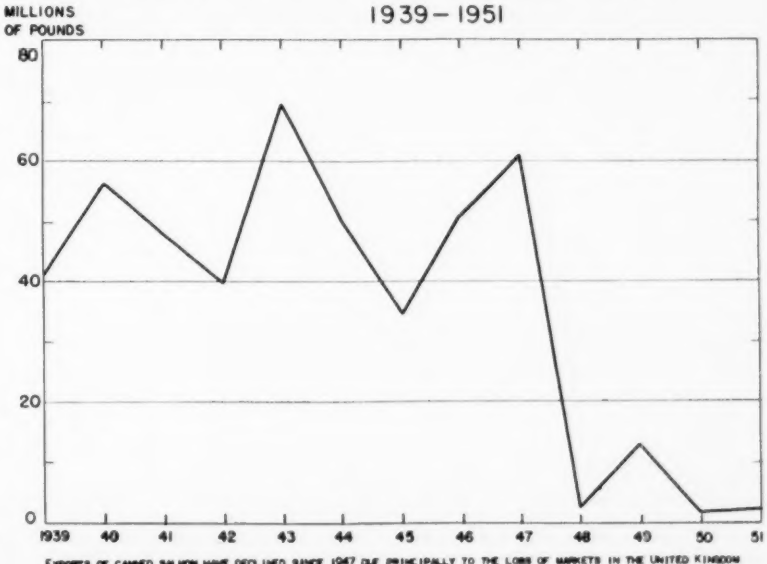
The revised pricing proved popular with the consumers and retailers, even if it did not with many of the holders and brokers of salmon. Pinks were priced at 49c in most stores throughout the country, and down to 45c. At these levels they sold readily.

Salmon Industry Advertising Comes Under Consideration

First wave of a new movement for industry advertising of canned salmon rose in the late spring and early summer of 1952, when a compact "task force" took a look at the possibilities of program and support. The idea was for a "quickie" campaign, pin-pointed toward a few markets where the situation was weakened by concentrations and consignments. Time was of the essence, and while the project developed some support, it did not come in sufficient speed or volume to permit launching of the emergency treatment before new pack.

Red salmon selling started off with a peculiar slant. The Copper River

UNITED STATES EXPORTS OF CANNED SALMON
1939 – 1951



EXPORTS OF CANNED SALMON HAVE DECLINED SINCE 1947 DUE PRINCIPALLY TO THE LOSS OF MARKETS IN THE UNITED KINGDOM RESULTING FROM RESTRICTIONS ON THE USE OF DOLLAR EXCHANGE FOR PURCHASE OF THIS PRODUCT.

SOURCE: BUREAU OF THE CENSUS. U. S. Fish and Wildlife Service

FARWEST FISHERMEN INC. - Anacortes, Wash.

PACKERS and DISTRIBUTORS

HIGH QUALITY ALASKA and PUGET SOUND SALMON

Canned Salmon Brands

BLUE BIRD	BEST RED	NORTHERN GEM	FARBEST	RED ROSE	SEA-RUN and SEA LASSIE
Fancy Hand Filled Puget Sound Sockeye Salmon	Fancy Red Alaska Sockeye Salmon	Puget Sound & Alaska Chum Salmon	Ocean Caught Coho Salmon	Puget Sound & Alaska Coho Salmon	Puget Sound & Alaska Pink Salmon

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Fishing boats assembled at the modern Farwest Puget Sound Cannery

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INITIAL PRICES FOR CANNED SALMON

(Per case of 48 cans. Prices in dollars and decimals)

YEAR	Chinook Columbia Riv. Fancy	Sockeye Puget Sound	Red Alaska		King Alaska	Coho — Medium Red		Pink		Chum	
	Halves	Halves	Talls	Halves	Talls	Talls	Halves	Talls	Halves	Talls	Halves
1910	$4.4	$4.4	$5.4	$4.	$5.4	$5.	$3.2	$3.2	...	$3.1	...
1911	5.2	5.2	6.4	4.5	7.2	5.8	4.	4.	$3.2	3.8	$3.
1912	5.	5.2	5.6	4.6	5.6	4.6	3.2	2.6	2.2	2.5	2.
1913	5.	4.2	4.6	3.8	4.	3.4	2.8	2.6	2.2	2.2	2.
1914	5.	5.4	5.8	4.4	5.6	4.6	3.3	3.6	2.8	3.4	2.6
1915	5.	5.4	6.	4.6	5.	4.6	3.	3.	2.3	2.8	2.1
1916	5.	5.6	6.	4.8	5.4	5.2	3.6	3.6	3.	3.4	2.7
1917	7.	7.	9.4	6.6	9.	8.	5.4	6.6	4.6	6.4	...
1918	8.	8.	9.4	6.6	9.	9.6- 9.	6.4	6.6	4.6	7. - 6.4	4.4
1919	8.	10.	13.	9.	12.5	12.	8.	9.	5.6	8.6	5.
1920	10.	12.	13.	9.	12.	8.	6.	6.	4.4	4.6	3.6
1921	8.4	10.	9.4	8.	7.	6.	3.8	4.4	3.2	4.	2.6
1922	13.	10.	9.	7.	7.	5.	4.	4.6	3.2	4.2	2.8
1923	10.	10.	9.	6.6	8.	5.6	4.	5.	3.6	4.8	3.4
1924	8.8	9.	9. -10.	6. - 7.	8.6 - 8.4	7. - 6.	5.4- 4.2	5.2- 5.	3.6	4.8	3.4
1925	8.4	9.4 -10.	14.	9.	13. -12.	11. -10.	7.4- 7.	5.8- 5.	4. - 4.4	4.6- 4.4	3.6- 3.4
1926	9.4	10.	10.	8.	9.	9.	6.	5.4	4.2	5.	3.6- 3.2
1927	9.4	11.	12.4	9. - 8.6	11.4 -10.6	10. - 9.	6.6- 6.	6. - 5.4	4.6- 4.4	5.4- 5.2	3.8
1928	9.8	10.4	9.4	7.4	8.6 - 8.	7.4- 7.	5.4	6.6	4.4	6.4	4.
1929	10.4-10.	10.	10.6	8.	9.	8. - 7.4	5.6- 5.4	6.	4.4	5.4	4.
1930	10.	8.	12.4	8.	10.6	9.	5.6	4.	3.	3.6	2.8
1931	8.	8.	9.4	6.6	7.	7. - 6.4	4.8- 4.6	3.4	2.8	3.2	2.6
1932	6.	6. - 5.	5.8- 5.	4.	4.4	4.	3.2- 3.	3.4- 3.	2.4	3. - 2.8	...
1933	7.6- 7.	7. - 6.6	7. - 6.6	4.8	6.	5.4	...	4.8	3.	4.6	2.8
1934	7.2	5.4	6.8- 6.4	4.8- 5.	5.4	5.	4. - 3.8	4.2- 4.	3.2	4. - 3.8	3.
1935	7.2- 7.	7.	9.4- 9.	6.6- 6.4	8. - 7.	6.6	4.4	4.2- 4.	3.2	4. - 3.8	3.
1936	8.	7.	8. - 7.6	6.	7.	6.6- 6.4	4.4	4.	3.4- 3.	3.7- 3.6	3. - 2.8
1937	8.4	8.4	10.	6.8	9.	8.	5.	5.	3.4	4.8	3.2
1938	9.2- 8.4	7.	7.8- 7.4	5.6	7.6 - 6.8	6.4	5.	4.	3.	3.8- 3.6	2.8
1939	9.2- 8.6	8.	9. - 8.6	6.7- 6.4	8.4	7. - 6.4	5. - 4.8	5.2- 5.	3.6- 3.4	4.6	3.2
1940	9.	8.4	9.6	6.6	9.2	7.4	4.8	5.4	3.8	4.8	3.4
1941	10.4	10.	13.6-13.4	8.2	12.	...	7.	7.	4.8- 4.4	6.8	4.6- 4.2
1942	13.	11.4	15.	10.	...	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1943	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1944	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1945	13.	11.4	15.	10.	14.	11.8-11.6	8.	8.	5.6	7.6	5. - 5.4
1946	18.5	19.	22. -20.	16.5-13.4	20.	17. -16.	11.6	12.	8.4	11.6- 9.4	8.
1947	20. -19.	22. -19.	24.5-22.6	17.5-16.	22. -21.4	22.	15.4-15.	19. -17.2	13.5-11.5	18.5-16.5	12.5-11.1
1948	23.5-22.	22.	27. -26.	19. -18.	26. -24.	25.	17.5-15.	23. -22.	15. -13.	20. -22.	13.5-12.
1949	20. -18.	...	26.5-25.	16. -15.	24. -22.	22. -21.	12.5	16.	10.	15.	9.5- 9.
1950	19. -21.	19. -20.	28. -29.	18.	23.	19. -22.	15.5	22. -24.	15.	20. -21.1	12.
1951	21. -23.	19. -21.	29. -31.	18.	26.	25.	15.	21.	12.5	18.	11.
1952	22. -23.	20. -19.	27. -30.	17.5-18.	25.	21. -22.	12. -13.	18. -20.	12.	16.	9.

NOTE: The title of this tabulation has been changed from "OPENING PRICES" to "INITIAL PRICES," and the prices of pre-war years — originally quoted per dozen each are converted to the per case basis which is now in general use.

The prices are quoted in dollars and decimals thereof, rather than in dollars and cents; and are based largely on formal "opening prices" announced as such by leading sellers, they are not limited exclusively to such quotations. The formal "opening prices" of different concerns are often incomplete, and vary so widely that a full presentation of them might be confusing. The purpose of this tabulation is to present comprehensively for each year the earliest prices at which substantial quantities of the pack were sold.

The prices here quoted for the war years are the "ceilings" established by the government. Those for 1946 are the prices announced by the majority of large packers after "de-control."

Sockeye run of 1952 proved the best in many years—if not for all time—and the fish can in such volume that it was necessary to put much of the pack in talls. These came to market early, at a time when the Bristol Bay pack had not yet been made. With an unusual stock of Copper River Sockeye talls, and in expectation of a "big year" pack on Bristol Bay, the Copper River goods were offered at $27, and were snapped up instantly.

Later, when the Bristol Bay pack proved extremely disappointing in volume—and consequently high in cost—the "independent" packers of unadvertised Reds priced them also at $27. The larger operations which nationally advertised brands put their pack at $30—and pricing held steady at these levels through the balance of the year. Thus 1952 Reds were higher in price than had been anticipated, but not high enough to offset the critical costs produced by pack shortage.

Big B. C. and Chum Packs Influence Pink Pricing

American Pink production was short, as anticipated, but the Chum yield was long, and the Canadian situation had import implications which could not be ignored.

Accordingly, a dramatic pattern developed.

Ready sellers saw the Pink price of 1952 as strongly influenced by the available supply of Chums, already tagged at $16; and the Pink potential in Canada.

Over the Labor Day week-end a price of $18 was set for Pinks, with the great majority of the pack falling into line with this figure. Sales were swift as the retail trade stocked up at a price which would enable it to maintain Pinks at the below-consumer-ceiling.

As the volume of Pinks remaining in first hands shrank, prices gradually advanced; and this put the big pack of Chums into a more favorable light. As the $2 spread between Pinks and Chums stretched to $3, the latter goods at $16 began to look mighty attractive to close buyers, with resultant satisfactory sales from the big pack of Chums.

The summer Chums which made up the very large majority of the pack were of very good quality. There was a moderate amount of fall packing. Some of these Chums were good enough to be priced with the summer grade, but the balance were tagged at $1 less. The amount of these late-below-average Chums was not so great that their pricing had adverse effect upon the standard pack.

Imports of Canadian Pinks Are Market Factor

Imports of salmon from British Columbia proved something of a factor in the United States market in the fall

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YEAR	SOCKEYE			COHO, SPRING, BLUEBACK			PINK			CHUM	
	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's	¼-lb. Flats 96's	1-lb. Talls or Flats 48's	½-lb. Flats 96's
1942-4 b	$16.25	$17.50	$10.50	$11.50	$12.75	$ 8.12½	$ 6.25	$ 7.50	$ 5.00	$ 6.25	$ 7.50
1945-6 b	17.65	18.90	11.20	12.90	14.15	8.82½	7.65	8.90	5.70	7.65	8.90
1946 c	18.90	20.30	.....	13.90	15.25	.....	8.30	9.70	....	8.30	9.70
1947	23.50	25.00	15.00	20.00	21.50	13.00	12.50	14.50	.....	12.00	13.50
1948	28.50	30.00	17.50	24.50	26.00	15.25	16.50	18.00	.....	15.00	16.50
1949	31.50	33.00	19.00	23.50	25.00	15.00	16.50	18.00	.....	12.50	14.00
1950	31.50	33.00	19.25	23.50	25.00	15.00	17.50	19.00	12.00	14.00	14.00
1951	36.00	38.00	21.50	27.50	29.00	17.00	19.00	20.50	12.75	16.50	18.00
1952	31.50	33.00	19.00	20.50	22.00	13.50	15.00	16.50	10.75	13.00	14.50

NOTE: Quotations for 1948 and 1947 packs represent packers' opening prices to the domestic market. Prices received for 1950 sales under the contract to the United Kingdom were considerably less than those quoted.

Prices marked "c" were established by the Canadian government in December, 1946, for sales to the domestic trade, but are also roughly equivalent to those received for export to the United Kingdom, etc. Prices marked "b" were those paid by the British Ministry of Food in 1945-46 and 1942 to 1944.

of 1952, although a number of elements reacted to prevent import pressure from becoming as great as some observers had anticipated earlier.

First, the Canadian pack had been put up at high cost, reacting against extremely low offerings;

Second, some of it had difficulty in meeting United States quality standards;

Third, the exchange premium on the Canadian dollar offset in large degree the recent tariff reduction from 25% to 15%.

As the selling season moved along the volume of Canadian salmon finding buyers in the United States increased gradually. This followed the reduction in the American stocks and the advance of the price from the $18 level to $19 and on toward $20. At such level the Canadians were able to recover close to $15, Canadian funds, and they found the trade worthwhile. At the same time close examination of the Canadian stock made it possible to select codes conforming fully to American standards, so that difficulties which had been encountered quality-wise by some of the early importations were almost wholly lacking toward the end of 1952, with a growing volume of imports entering the United States.

Freezership Fish in '52

Reaction from the 1951 pattern, when the packing of Reds in half-pound cans was seriously overdone, was manifest in 1952. Alaska operators shied away from halves almost as strongly as they had swung to them the year before.

This was particularly true of the freezerships, whose fish had been canned in halves almost 100% in 1951.

The 1952 pack of these freezer fish found readier acceptance than that of the preceding year, partly because it was priced slightly—about $1 on the average—below the quotations from standard Reds.

Trend Toward Smaller Cans For Salmon

The year saw the beginning of a trend toward packing salmon in "tuna-size" halves, with one ounce less net weight. Some goods were put in this package for market-study purposes, with results which are believed to have been favorable for expansion of the practice.

Idea behind it all was to bring salmon more closely into line competitively with tuna, not only in price but also in the size of can, it being felt that tuna had become the dominant element in halves, and that it perhaps was a mistake not to conform to the can size of this dominant half-flat.

Tuna affected the canned salmon market of 1952 in yet another way. Its improved market position and the greater stability of tuna's pricing during 1952 reacted favorably on salmon. Where in the fall of 1951 salmon suffered by the steep slide of tuna pricing, in 1952 this influence was largely lacking.

Smaller cans for salmon generally came in for consideration in 1952 as operators and merchandisers sought ways of keeping the product competitive in price and packaged for modern merchandising. Earnest study was given to suggestions for revision of the 1-lb. tall can, either by a simple reduction of the height to give net weight of contents of 14 or 12 oz., or by adoption of a squat shape with greater diameter and reduced height, with perhaps 12 oz. net weight.

Although the matter was still under study at the end of the year, it appeared unlikely that 1953 would see any concerted movement toward revising and restyling the standard salmon package.

Outlook Entering 1953

"When" was an important word in canned salmon marketing as 1953 opened—

"When" the last of the $27 Reds were gone the advertised lines at $30 would sell sweetly—

"When" last Pinks below $20 were sold there'd be a nice clean-up at that figure; and the Cohoes would move-out in jig-time

"When" Pinks were really at $20, Chums at $16 would sell like hot cakes.

As this was written, going into 1953, many observers thought these "whens" were just about at hand.

AMERICAN CANNED FISH VALUES BY AREAS

YEAR	PACIFIC COAST						States Other than Pacific TOTAL	United States TOTAL
	Alaska	California	Oregon	Washington	TOTAL	% of Nat'l. Total		
1935	$26,072,966	$25,252,965	$ 2,851,987	$ 4,955,117	$ 59,133,035	78.8	$15,860,684	$ 74,993,719
1936	45,078,945	26,296,129	2,972,959	3,582,880	77,930,913	82.3	16,726,956	94,657,869
1937	45,041,499	30,741,773	4,163,681	5,276,928	85,223,881	81.2	19,713,750	104,937,631
1938	37,059,151	25,232,688	3,638,815	3,762,575	69,693,229	83.5	13,752,660	83,445,889
1939	34,775,988	31,639,354	4,622,664	5,192,077	76,230,083	79.0	20,228,510	96,458,593
1940	31,836,480	36,949,395	5,294,488	3,987,170	78,067,533	82.9	16,046,513	94,114,046
1941	56,453,007	39,830,950	7,704,434	7,130,960	111,119,351	80.1	27,564,806	138,684,157
1942	48,874,227	44,506,354	12,375,323	8,319,559	114,075,463	78.8	30,567,784	144,643,247
1943	58,479,130	46,842,918	7,242,950	2,975,728	115,540,726	81.8	25,615,584	141,156,310
1944	52,072,335	53,653,337	11,720,608	3,706,586	121,152,866	79.5	31,158,318	152,311,184
1945	45,491,662	60,219,179	12,543,519	7,326,616	125,580,976	82.0	27,219,595	152,800,571
1946	55,081,941	85,457,037	12,164,093	18,202,350	170,905,421	75.1	56,724,033	227,629,454
1947	89,135,362	116,493,682	20,626,850	24,949,347	291,205,241	80.9	59,475,179	310,680,420
1948	97,657,187	137,876,592	21,926,969	18,497,700	275,958,448	82.1	60,223,031	336,181,479
1949	82,225,067	119,497,465	13,683,517	23,009,231	238,415,280	80.6	57,088,625	295,503,905
1950	82,828,503	140,251,694	19,250,557	25,370,759	267,701,513	81.3	62,661,340	330,362,853
1951	80,748,052	122,572,382	15,454,209	27,312,377	246,087,020	81.7	55,123,275	301,210,295

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MARKETS
SALMON

Canadian salmon sellers faced a serious situation in 1952 when, with a heavy carryover from the big pack of the year before, the United Kingdom market was closed to the British Columbia product. This condition was intensified by another large pack, put up at high costs. Strikes followed, with prices forced down to unprofitable levels.

Exports to the United States, advertising, and heroic sales efforts moved much salmon, but 1952 closed with the situation still grimly serious.

MOST of the grim predictions concerning market prospects for British Columbia salmon in 1952 were unhappily borne out. There were a few bright spots in the selling picture, which was ominously darkened by the announcement early in the year that the United Kingdom, mainstay of the export trade for many years, would not be buying any canned salmon from the West coast.

The industry started the 1952 season with a carryover of unsold canned salmon from the previous season amounting to more than 600,000 cases. During the balance of the year the operators, plagued with many other problems such as continuing disputes with fishermen over prices, faced the necessity of trying to clear their shelves of the old pack while seeking an alternative outlet to replace the lost United Kingdom and other Commonwealth countries, all of which had been eliminated as buyers because of their reluctance to part with dollars for supplies that conceivably could be obtained in soft money areas.

At the year-end some of the packers encouraged the forlorn hope that the Commonwealth economic conference in London in December might pave the way towards easing the restrictions on trade. Their resourcefulness was taxed to maintain sales volume, and as one contribution to this end prices of canned salmon were sharply reduced.

B. C. Pink Salmon Find Market in U. S.

One interesting development was the sale during 1952 of some 150,000 cases of British Columbia canned Pinks in the United States at prices in line with the prevailing American level. Canned salmon from the Canadian province has seldom been able to hurdle the American tariff in the past, but when the duty was reduced following the Torquay Conference from 25% to 15% the B. C. industry felt that it had at least a chance of breaking into the American market, even though this hope was temporarily dimmed when the Canadian dollar commanded a premium in the United States. However, the year's sale of Pinks represented the first movement in volume of Canadian canned salmon into the United States in many years, and it was due entirely to the relatively light pack of Pinks in American waters.

As in other years, the Canadian market sustained the British Columbia industry, and the bulk of the pack is being disposed of there. Nevertheless, another year of hard selling was faced by the packers at the dawn of 1953, even though the carryover from the 1951 pack was cleaned up by early November. The 1952 pack was moving well in the available markets, but an expanded area of marketing is required to liquidate the Sockeyes and Coho before new pack operations commence in July, 1953.

Cohoes and Chums Lead in Carryover

The 1952 season was in marked contrast to 1951, when so many of the factors were favorable, with a pack unexpectedly large and wonderfully diversified, and with the United Kingdom buying some 290,000 cases at an average price of $24 a case, representing a total return to the industry of about $7,000,000.

Large quantities of Cohoes and Chums were carried over from 1951 and these two species invariably encounter more sales resistance than Sockeyes and Pinks. Measures were adopted to limit the pack of these less favored species in 1952 by diverting to fresh and frozen use and by shipping the fresh fish to Puget Sound canners. The effectiveness of this program may be judged by an examination of the comparative pack figures.

In *Pacific Fisherman Yearbook* of 1952 it was stated: "If the British buying policy depends entirely on the dollar position, that country may be compelled to revert to an approximation of the situation in 1948, when Britain didn't buy a single can of B. C. salmon." At the time those words were written, the industry had hopes that something would take place to enable the United Kingdom to continue buying, but nothing did.

Advertising Stimulates Sales

One fact that has been gratifying to the British Columbia salmon canners is that in the limited markets that are available to them they have been able to sell in improved volume. The stimulus to the consumer demand in Canada has been greatly aided by the brand name advertising of individual packers and by the Associated Salmon Canners of B. C., a group which represents practically all the packers and which had paid out about $250,000 a year for the past three years on promotion designed to increase the consumption and sale of B. C. canned salmon in Canada. One of the results of this campaign has been to boost annual sales in the domestic market to about 900,000

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cases, which is approximately 50 percent higher than in pre-war years.

Faced with a serious marketing condition, the industry required some reduction in raw fish prices to permit continuance of normal operations. Reductions in raw fish costs were brought about by negotiations with the fishermen and are summarized as follows: Sockeye, no change; Net-caught Coho, from 18c to 13c a pound; Pinks, from 9½c to 8c per pound; Chums, from 7½c to 5½c per pound.

As the season ended, the packers were faced with an apparent surplus of Sockeyes, as well as Coho. In the days when export markets were open, there was never any trouble in disposing of canned Sockeye, but this year the Canadian market was the only one that could be depended on, and the maximum annual consumption there has been about 300,000 cases. The fact that the pack of Sockeye in 1952 was actually about 450,000 cases, the largest since 1946, created the almost unprecedented problem. But it didn't appear to be insurmountable. Canned Sockeye Salmon has seldom lacked a buyer for long.

Partly because of the marketing difficulties experienced by the packers and their consequent inability to continue paying higher prices for raw fish, the fishermen went on strike over the offer made for Fall Chums, and they were out for a record-breaking 42 days. As a result of the tieup, the landed value of fish during the usually busy October totalled only $1,572,000 against $3,511,000 in the corresponding month a year previous.

Productionwise one of the striking differences from past seasons was in the volume of Chums packed. By late November the total pack of this grade was barely one-quarter the figure for each of the five preceding seasons with the exception of 1949 and the smallest in 20 years.

Prices Reduced Sharply

In an effort to move stocks, the canners sharply reduced prices of all grades early in September, and while there was a good deal of variation in individual prices in the domestic field quotations for regularly advertised brands were approximately as follows: Sockeye, 96 half pound flats, $33; Coho, 96 halves, $22; Pink, 48 one-pound talls, $15; 96 halves, $16.50; Chum, 48 one pound talls, $13; 96 halves, $14.50.

Prices have remained firm at these levels with the exception of some off grade Sockeye which was traded at $30 or less. The short position on Chums has had a strengthening effect on this grade.

As 1953 opened, moderate quantities of Canadian Pinks were able to find market in the United States, but the volume was limited by import difficulties and close price margins.

TUNA sales over the national field continued to march forward in 1952 and it was believed that in excess of 10,000,000 cases were sold. The domestic pack was slightly ahead of 1951.

California's 1952 total production topped 1951 by its final rush of production before the year ended. However, up to the final quarter domestic packing was struggling to catch up to 1951.

But, if California's fishing fleets failed to do much better than 1951—and the final figures will probably disclose fishermen didn't do as well—the imports of raw and canned had climbed alarmingly and were 'way ahead of 1951.

This condition naturally affected the sales position of the west coast canners. The eastern seaboard, for example, remained practically "closed territory" for them. To October 1, Peru alone had sent in 600,000 cases of tuna and tuna-like fishes, much of which was distributed along the east coast. Too, there were six or so tuna canners "back east."

Expensive, but very effective were the tie-ins made on national advertising and sales promotion by canned tuna with other food products. These were shared in, not only by individual packers but also by packers and fishery associations.

The industry as a whole spent millions on canned-tuna advertising and promotion. Give-away campaigns were successful; point of consumer sales and preferred store position programs were vigorously carried out. The result was an increase of national sales—some put it at around 7 to 8% —from last year. It was the domestic producer and not the foreign canned fish that paid the freight.

"National Tuna Week" was staged November 6-15, sponsored by the Tuna Research Foundation. It put on an aggressive campaign of sales promotion, of broadsides, tie-ins in national magazines, newspapers, radio, TV, etc. It is planned to hold this "week" every year.

While California alone processed around 30,00 tons of Albacore in 1952 —some 10,000 tons of it was Japanese raw imports—the sales and price position of White Meat did not improve to its former position. The year opened with White Meat, fancy, nationally-advertised brands quoted at $16.00, ½s, 48. It closed at $15.00-$16.00 and during late summer was even weaker.

Light Meat, fancy, advertised held a strong position all year: Opened at $14.75 and closed about the same. However, with traditional allowances, the canned product still was only shading the profit line; if at all. Grated, even the secondary advertised labels sold practically throughout the year as a losing item.

The chunk-style continued to grow in popularity and packers were devoting more and more of their raw material to this pack. Light Meat, chunk-style, advertised was being quoted at year's end, f.o.b. west coast, at $13.00 to $13.50, a position just slightly improved from the year's opening quotations.

The carryover by California packers was not considered in excess—probably rather below the stocks in first hands as 1952 opened. Markets were reported strong for what is normally the dullest selling period of the year. Rotations for Southern California's tuna fleets would probably hold the early production to a minimum.

●

AS 1952 opened very few California canned sardines were available. What few there were went for export at $7.25 to $7.50 for 15-oz. talls, and ovals in tomato sauce went as high as $9.50, during the year.

However, some packers ceilings were as low as $6.25. The southern California pack was sold early, and very few had been packed in northern California.

Trading was slow during the summer, due to uncertainty as to supply, and lack of canned goods, and there was no trading in 1952-53 future pack of sardines at all.

In Monterey a run of anchovies started in the last week of June when there were four or five days packing, there were six or seven days of packing in July, seven or eight in August, nothing was packed in September, but on October 8, a good run started, and fish were brought in to Monterey, Moss Landing, and San Francisco and about 10 canneries in all were busy packing anchovies.

Boats were put on limits of up to 20 tons.

Ovals, 15-oz. in tomato sauce started selling at $8.00 and 5-oz. in tomato sauce were in good demand at $7.50. As the year went along the market strengthened to a point where premium brands were selling for $8.25 for ovals in tomato sauce, and $7.75 for 5-oz. in tomato sauce.

All of the pack was going export, labelled as sardines, until in November the U. S. Food & Drug through the Department of Commerce put a hold on all shipments of such shipments of anchovies labelled as sardines, pending an investigation as to whether they should be so labelled or

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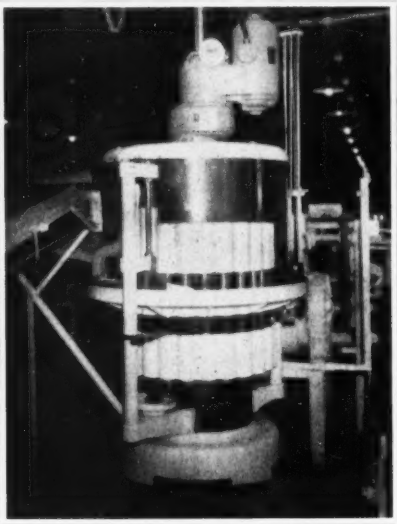
Pak-Shaper's introduction in 1949 developed in tuna canning a greater measure of mechanization than had come about in 30 years of previous growth. . . . Subsequent experience has proved its value to the industry. A large percentage of major tuna operators presently employ the Pak-Shaper.



THE PAK-FORMER

The Pak-Former Now Available to the Tuna Industry

This machine has been developed exclusively for Chunk and Grated Style Pack. A variable speed drive permits filling speed adjustments of between 50 and 250 cans per minute. Available to the industry under similar terms as the Pak-Shaper.

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"BLUE SHORE"] TUNA

"OLD SOUTH" PACIFIC MACKEREL
"SEA GOLD" JACK MACKEREL
"SOUTH PACIFIC" SARDINES
FISH MEAL and FISH OIL

543 PICO LONG BEACH, CALIFORNIA

CALIFORNIA FISH CANNING PLANTS

In the table below, the company name is followed by that of the president, principal owner, or managing director. Location given is that of the plant, not necessarily that of the company headquarters. This is followed by one or more letters indicative of the plant products. These products are represented as follows: (a) canned sardines; (b) canned tuna; (c) canned mackerel; (d) other canned fish products.

SAN FRANCISCO DISTRICT

Bell Smoked Fish Co., Joe Tarantino....San Francisco (b, d)
F. E. Booth Co., Inc., A. H. Mendonca
.....San Francisco (a, b, d)
Hickmott Canning Co., J. H. Dempsey.....Antioch (d)
J. D. Packing Co., James A. Davi.....San Francisco, (a, d)
Keystone Fisheries, Erling F. Week, Jr.
.....San Francisco (a, b)
Tom Lazio Fish Co., Tom Lazio.....Eureka (b, d)
Northern Packing Corp., George Christo
San Francisco (a)
Ocean Picnic Sportsmen's Cannery, Paul Thurmond
.....Eureka (b, d)
Pacific Sea Products, Ben Nichelson.....San Francisco (b)
Paul's Cannery, Chester J. Paul.....Crescent City (d)
Red Rock Fisheries, J. H. Dempsey.....Pt. San Pablo (a)
Romeo Packing Co., Joe Romeo.....Half Moon Bay (a, b, d)
Washington Fish & Oyster Co. of Calif., Tom Miller
.....San Francisco (b, d)

MONTEREY BAY DISTRICT

Aeneas Sardine Products Co., Inc., Frank E. Lucido
.....Monterey (a, d)
Atlantic Coast Fisheries Co., J. R. Perry.....Monterey (a, d)
Calif. Frozen Fish Co., Sal Ventimiglia.....Monterey (a, d)
Calif. Packing Corp., Don T. Saxby.....Monterey (a, d)
Carmel Canning Co., J. R. Perry.....Monterey (a, d)
Edgewater Packing Co., Charles J. Broad....Monterey (a, d)
Enterprise Packers, Sebastian Sollecito.....Monterey (a, d)
Hovden Food Products Corp., K. Hovden
.....Monterey (a, b, d)
Hovden Food Products Corp., K. Hovden
.....Moss Landing (a, b, d)
Monterey Canning Co., Magnus Flause.....Monterey (a, d)
Monterey Fish Products Co., Frank Lucido
.....Monterey (a, d)
Oxnard Canners, Inc., Sal Ferrante.....Monterey (a, b, c, d)
Peninsula Packing Co., G. H. Leutzinger
.....Monterey (a, b, c, d)
Pacific Vegetable Oil Corp., Frank Richey
.....Moss Landing (a, d)
San Carlos Canning Co., C. D. Day.....Monterey (a, d)
San Filippo Co., Sam Sanfilippo.....Monterey (a)
San Xavier Fish Packing Co., Frank E. Raiter
.....Monterey (a, b, d)
Santa Cruz Canning Co., Joe Olivieri.....Moss Landing (a)
Sea Beach Packing Co., Sal Palma.....Monterey (a, d)
Westgate-Sun Harbor Pkg. Co., Paul Jepson
.....Monterey (a, b, c, d)

SAN PEDRO DISTRICT

California Marine Curing & Packing Co., Max J. Gorby
.....Terminal Island (a, b, c, d)
Coast Fisheries Divn. of Quaker Oats Co., J. R. Biven
.....Wilmington (a, b, c, d)
F. E. Booth Co., Paul Alsup.....Long Beach (a, c, d)
Franco-Italian Packing Co., Joseph Mardesich
.....Terminal Island (a, b, c, d)
French Sardine Co., J. J. Bogdanovich
.....Terminal Island (a, b, c, d)
Harbor Canning Co., George DeLaTore....Wilmington (a, c)
Lido Fisheries, Inc., Nick Kovacevich.....Long Beach (a)
Pan-Pacific Fisheries, Inc., Gerald Cigliana
.....Terminal Island (a, b, c, d)
Paramount Canning Corp., Walter Brewer
.....Newport Beach (a, b, c)
Seaside Fisheries Co., Harry H. Steele.....Long Beach (a, c)
South Pacific Canning Co., M. D. Marsh
.....Long Beach (a, b, c, d)
Southern California Fish Corp., Larry W. Holland
.....Terminal Island (a, b, c, d)
South Coast Fisheries, Inc., P. A. Kuglis
.....Terminal Island (a, b, c)
Terminal Island Sea Foods, Ltd., H. C. Davis
.....Terminal Island (a, b, c, d)
Van Camp Sea Food Co., NK, IN & CP Plants,
G. C. Van Camp.....Terminal Island (a, b, c, d)
West Coast Packing Corp., Albert Vignolo
.....Long Beach (a, b, c, d)
West Coast Packing Corp., Roy Roush
.....Newport Beach (a, c)

PT. HUENEME DISTRICT

California Packing Corp., J. P. Lukes.....Hueneme (a, d)
Malibu Canning Co., J. B. Lindsay.....Hueneme (a, d)

SAN DIEGO DISTRICT

High Seas Tuna Packing Co., John Xitco.....Pt. Loma (b)
Van Camp Sea Food Co., Glenn Copeland.....San Diego (b)
West Coast Pkg. Co., Albert Vignola, Jr.....San Diego (b)
Westgate-Sun Harbor Co., James B. Lane.....San Diego (b)

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not. This of course threw anchovy canners into a dither.

Very little mackerel was packed in Monterey canneries during the year. However, the demand for mackerel was good in San Francisco during the year. Mackerel in 15-oz. tall cans was selling for $7.25, and some in oval cans was selling for $8.75.

Northern California enjoyed a fair herring season. Canneries worked on this fish on Monterey Bay and at San Francisco. Ovals in tomato sauce were selling at $7.50. It was all going export.

Mackerel production and sales were good in 1952, and somewhat relieved the packers' headaches on canned sardines. The year didn't begin well. In fact, predictions were made that mackerel fishing would be as poor as the end of the 1951-52 sardine season had been.

For six months that prediction seemed destined to be borne out. Then came the sensational discovery of immense schools—mostly Jack mackerel—in vicinity of the Tanner and Cortez banks, 150 miles out from Los Angeles Harbor, home of the mackerel fleet.

Opening prices for canned mackerel were: Pacific, talls/48, $7.40; Jack, talls, $6.00 to $6.75. Packers were then experimenting with mackerel packed in oval cans with tomato sauce for the export trade, to substitute for the scarce sardines. However, it did not prove to be a good selling item.

On December 1, Pacific mackerel was being offered at $8.00; Jack at $7.25, a good advance for the year and with plenty of buyers throughout the national mackerel-selling field. Some were being shipped abroad, but most were finding a ready market in the U. S.

By November 1, the Southern California pack had reached and passed the million-case mark. Thus, from a dismal beginning, 1952 became one of the best California mackerel years.

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CONSERVATION

Conservation on an oceanic scale came to the North Pacific in 1952 with signature of the Tripartite Treaty, by which the United States, Canada and Japan undertake to establish the North Pacific Fisheries Commission to study and recommend means by which the fishery resources may be conserved on a sustained-yield basis.

Scientific research was pressed, from the salmon spawning streams of the sub-Arctic above Bristol Bay to the tuna seas along the Equator.

The problems are complex and the secrets well hidden, but they yield gradually.

HISTORIC progress in the field of international fisheries conservation was recorded in 1952 with the signature and ratification by the United States and Japan of the Tripartite Treaty for North Pacific fisery conservation.

The year ended with the treaty not yet fully effectuated, as Canada had not completed its formal acceptance of the instrument.

In brief, the Tripartite Treaty enunciates this thesis:

A country should abstain from a coastal fishery when:

1. That fishery is already fully exploited; and

2. It is regulated under a scientific conservation program seeking maximum yield; and

3. It is subject to continuing scientific study.

In the annex to the treaty Japan accepts the salmon, halibut and herring fisheries of the northeast Pacific as qualifying under the above points; and abstains from them.

The treaty establishes a North Pacific Fisheries Commission composed of representatives of the United States, Canada and Japan, and charges it with studies designed to further scientific knowledge of the fisheries, and to recommend to the governments of the signatory countries actions which should be taken to advance conservation of the fisheries of treaty waters.

Sardine Problem Grappled

Intense research of the California sardine population continued through 1952 as perhaps the most extensive single scientific study ever undertaken in the field of fisheries biology. The year brought further evidence of the necessity for this type of study as the commercial catch dwindled to the vanishing point. The failure which had occurred earlier in northern and central California waters spread in 1952 to those off southern California.

This research is a coordinated program supported by the sardine industry, with elements of the coordinated study pursued by the California Department of Fish and Game, the U. S. Fish and Wildlife Service, agencies of the University of California, and the California Academy of Sciences.

Salmon Research Advances Along Varied Front

Salmon research and conservation was accented in 1952 in several noteworthy aspects:

1. Enunciation by Dr. W. F. Thompson, director of the Fisheries Research Institute, of the thesis that differential productivity exists in salmon spawning escapements, within the season and also in certain years within the cycle; and that the most productive escapement of Red salmon sustains not only the run of its cycle year but

Fraser River Sockeye Salmon Catch by Cycles

British Columbia	1939—	568,943	1940—	937,062	1941—	2,116,723	1942—	5,047,599		British Columbia
Washington		552,179		709,661		1,560,482		2,921,805		Washington
TOTAL		1,121,122		1,646,703		3,677,205		7,969,404		TOTAL
British Columbia	1943—	349,011	1944—	1,003,829	1945—	969,444	1946—	4,239,622		British Columbia
Washington		242,822		436,182		716,685		3,551,761		Washington
TOTAL		591,404		1,440,011		1,686,129		7,791,383		TOTAL
British Columbia	1947—	354,000	1948—	751,812	1949—	1,020,799	1950—	894,469		British Columbia
Washington		90,117		1,089,060		1,058,117		1,220,935		Washington
TOTAL		444,117		1,840,872		2,078,916		2,115,404		TOTAL
British Columbia	1951—	1,288,162	1952*—	1,155,000						British Columbia
Washington		1,136,791		1,106,000						Washington
TOTAL		2,424,953		2,261,000						TOTAL

*Figures for 1952 are preliminary.

Figures in this table, taken from reports of the International Pacific Salmon Fisheries Commission, represent the actual numbers of Sockeye known to have been caught in waters covered by the Fraser River Sockeye Salmon treaty. Reliable catch statistics for years prior to 1939 are not available.

CONSERVATION

Fraser River-Puget Sound Sockeye Pack, by Cycles

British Columbia	1895—	395,984	1896—	356,984	1897—	860,459	1898—	256,101	British Columbia
Washington		65,143		72,979		312,048		252,000	Washington
TOTAL		461,127		429,963		1,172,507		508,101	TOTAL
British Columbia	1899—	480,485	1900—	229,800	1901—	928,669	1902—	293,477	British Columbia
Washington		499,646		228,704		1,105,096		339,556	Washington
TOTAL		980,131		458,504		2,033,765		633,033	TOTAL
British Columbia	1903—	204,809	1904—	72,688	1905—	837,489	1906—	183,007	British Columbia
Washington		167,211		123,419		837,122		182,241	Washington
TOTAL		372,020		196,107		1,674,611		365,248	TOTAL
British Columbia	1907—	59,815	1908—	74,574	1909—	585,435	1910—	150,432	British Columbia
Washington		96,974		170,951		1,097,904		248,014	Washington
TOTAL		156,789		245,525		1,683,339		398,446	TOTAL
British Columbia	1911—	58,487	1912—	123,879	1913—	719,796	1914—	198,183	British Columbia
Washington		127,761		184,680		1,673,099		335,230	Washington
TOTAL		186,248		308,559		2,392,895		533,413	TOTAL
British Columbia	1915—	91,130	1916—	32,146	1917—	148,164	1918—	19,697	British Columbia
Washington		64,584		84,637		411,538		50,723	Washington
TOTAL		155,714		116,783		559,702		70,420	TOTAL
British Columbia	1919—	38,854	1920—	48,399	1921—	39,631	1922—	51,832	British Columbia
Washington		64,346		62,654		102,967		48,566	Washington
TOTAL		103,200		111,053		142,598		100,398	TOTAL
British Columbia	1923—	31,655	1924—	39,743	1925—	35,385	1926—	85,689	British Columbia
Washington		47,402		69,369		112,023		44,673	Washington
TOTAL		79,057		109,112		147,408		130,362	TOTAL
British Columbia	1927—	61,393	1928—	29,299	1929—	61,569	1930—	103,692	British Columbia
Washington		97,594		61,044		111,898		352,194	Washington
TOTAL		158,987		90,343		173,467		455,886	TOTAL
British Columbia	1931—	40,947	1932—	65,769	1933—	52,465	1934—	139,238	British Columbia
Washington		87,211		81,188		126,604		352,579	Washington
TOTAL		128,158		146,957		179,069		491,817	TOTAL
British Columbia	1935—	62,822	1936—	184,854	1937—	100,272	1938—	186,794	British Columbia
Washington		54,677		59,505		60,259		134,641	Washington
TOTAL		117,499		244,359		160,531		321,435	TOTAL
British Columbia	1939—	54,296	1940—	99,009	1941—	171,290	1942—	446,371	British Columbia
Washington		43,511		59,354		110,605		263,458	Washington
TOTAL		97,807		158,363		281,895		709,829	TOTAL
British Columbia	1943—	31,973½	1944—	88,515	1945—	79,781½	1946—	331,292	British Columbia
Washington		19,179		37,509		53,054½		280,018	Washington
TOTAL		51,152½		126,024		132,836		611,310	TOTAL
British Columbia	1947—	27,857	1948—	61,650	1949—	80,629	1950—	81,510	British Columbia
Washington		7,516		90,441		80,547		116,458	Washington
TOTAL		35,373		152,091		161,176		197,968	TOTAL
British Columbia	1951	134,400	1952*	117,000					British Columbia
Washington		118,151		115,000					Washington
TOTAL		252,551		232,000					TOTAL

*Figures for 1952 are approximate.

Statistics represent 48-lb. cases of Sockeyes caught in the Fraser River district of British Columbia and adjacent waters of the state of Washington, whether canned in those districts or elsewhere — and not including other Sockeye canned in those districts. This accounts in large part for the discrepancy between these statistics and those appearing elsewhere in this issue.

also contributes importantly to sustenance of the poorer years of the cycle.

2. The U. S. Fish and Wildlife Service consolidated its Pacific salmon research under one chief, and freed the scientific program from subservience to the regional offices within whose territory the studies are pursued.

3. On the Fraser River the International Pacific Salmon Fisheries Commission brought to completion the high-level fishway on the left bank of the Fraser at Hell's Gate, thus providing unimpeded passage for migrating Sockeye at the rare extreme upper stages of the stream.

4. Provision in 1952 for comprehensive studies of the effect of dams on downstream migrants was regarded as highly important in that it promised an energetic attack upon an obscure aspect of the problem of fish life maintenance in the face of the dams.

Progress in Mid-Ocean

Significant progress in the mid-ocean research was recorded in 1952 by the Pacific Oceanic Fishery Investigations, working out of the Hawaiian Islands. Seeking the facts influencing the occurrence, abundance and availability of tuna in the mid-Pacific, P.O.F.I. established the existence of an enormous, although variable, population of tuna at sub-surface levels in a great band parallelling the Equator a short distance to the north.

Of interest also was the progress made in research sponsored by P.O.F.I. toward development of extracts with attraction for tuna. This work was undertaken as a possible means of overcoming the handicap laid upon mid-ocean tuna fishing by the scarcity of live bait.

To Limit Trawl Mesh

Trawl fish conservation by means of uniform coastwide regulations for minimum mesh in cod-ends was advanced late in 1952 when the Pacific Marine Fisheries Commission recommended to the states that the minimum mesh of cod-ends be set at 4½" escape opening—5" commercial web—with the exceptions of special fisheries such as ocean perch and shrimp, for which smaller mesh may be allowed under proper safeguards against use in other fisheries.

Babine Slide Attacked

Excellent progress was made in 1952 in coping with the situation created the year before by a great slide that blocked the Sockeye run to the Babine fork of the Skeena.

Emergency measures got much of the 1952 run past the obstruction—but with some delay—and contract was let for rock removal designed to permit salmon to pass the slide sector.

SALMON ESCAPEMENT OVER BONNEVILLE DAM

(In numbers of fish as recorded by U.S. Engineers)

CHINOOK

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1938	*	*	*	*	22,371	8,221	6,556	34,765	197,294	2,302	263	27	271,799
1939	6	12	121	51,410	25,159	5,602	17,845	32,919	150,851	2,197	78	16	286,216
1940	...	...	504	37,253	28,621	7,028	14,938	58,643	240,515	3,765	287	34	391,588
1941	4	...	1,360	51,501	19,445	7,013	9,395	12,590	351,967	7,179	866	138	461,458
1942	1	15	34	9,506	30,915	11,816	12,821	27,581	305,935	4,485	639	190	403,938
1943	11	6	43	12,172	53,268	5,440	8,044	28,985	201,414	3,354	365	21	313,123
1944	1	2	65	15,670	15,127	4,363	8,241	55,468	139,254	2,388	164	20	240,763
1945	6	4	81	17,148	26,276	11,293	16,327	32,254	189,675	4,281	137	6	297,488
1946	1	2	25	14,179	53,313	30,051	20,960	45,421	277,075	4,521	170	25	445,743
1947	...	2	141	83,520	49,899	25,502	13,358	43,062	260,385	3,945	526	36	480,376
1948	10	...	251	21,205	20,262	44,137	23,100	35,934	270,238	3,928	467	23	419,555
1949	...	...	5	5,765	44,304	24,232	22,500	41,500	137,599	1,571	215	6	277,697
1950	...	...	21	6,630	50,638	16,667	32,937	40,462	205,521	4,356	143	...	357,375
1951	...	...	32	28,801	86,055	54,889	24,394	33,785	97,131	6,489	212	...	331,788
1952	**	**	255	8,130	107,807	62,491	21,800	82,290	135,053	2,576	477	**	420,879

STEELHEAD

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1938	*	*	*	*	6,622	2,382	19,455	29,231	46,618	2,264	339	92	107,003
1939	23	19	560	8,110	1,587	1,490	36,581	38,062	33,891	1,264	216	119	121,922
1940	5	96	1,688	4,125	998	4,489	61,175	46,071	64,377	1,786	292	59	185,161
1941	37	76	1,641	6,392	1,518	994	21,940	29,600	50,542	3,980	1,063	304	118,087
1942	4	37	256	3,642	4,159	1,588	19,905	41,973	76,622	2,411	566	182	151,345
1943	14	18	654	3,374	4,698	1,564	7,755	29,894	41,051	2,444	573	92	92,131
1944	50	157	1,019	6,142	2,227	1,169	21,868	24,508	35,907	6,129	1,119	226	100,521
1945	1,003	1,078	3,066	4,685	1,557	1,109	24,600	40,483	40,194	1,925	302	142	120,144
1946	63	551	3,040	9,839	5,481	3,265	20,559	58,356	38,296	2,067	262	769	142,548
1947	197	321	1,968	6,889	2,025	1,595	28,134	40,819	50,025	2,905	443	113	135,434
1948	154	119	1,631	4,473	1,170	1,895	33,191	53,621	40,609	1,742	381	76	139,062
1949	1	...	1,689	3,293	1,712	1,264	34,314	54,281	20,786	1,161	686	98	119,285
1950	13	...	1,156	4,537	1,667	691	25,142	53,904	24,226	1,932	811	...	114,079
1951	...	...	375	2,338	1,568	5,187	74,980	39,712	15,357	947	225	...	140,689
1952	**	**	278	1,248	1,751	8,202	118,110	79,735	48,293	2,735	638	**	260,990

SILVERS

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1938	*	*	*	*	...	...	...	3,070	10,995	972	141	7	15,185
1939	3	...	...	...	...	...	...	1,810	12,226	310	15	18	14,382
1940	3	...	...	...	...	...	...	1,451	10,212	213	33	5	11,917
1941	2	...	...	...	...	...	...	1,317	16,061	369	160	2	17,911
1942	...	...	...	...	...	...	...	1,193	11,061	147	...	...	12,401
1943	...	...	...	...	...	...	...	762	1,676	89	20	...	2,547
1944	...	...	...	...	...	...	...	1,052	3,022	103	29	2	4,208
1945	...	...	...	...	...	...	2	239	533	16	...	1	791
1946	...	10	4	...	...	...	22	227	3,609	1	...	24	3,897
1947	12	2	1	...	...	...	...	217	10,928	10	3	1	11,174
1948	1	...	...	...	...	...	11	158	3,893	10	3	5	4,081
1949	...	...	...	...	...	...	17	270	703	5	8	1	1,004
1950	...	...	...	...	...	...	...	1,572	8,545	36	...	...	10,153
1951	...	...	...	...	...	...	...	197	4,773	225	6	...	5,201
1952	**	**	...	...	...	...	10	2,581	5,131	22	24	**	7,768

BLUEBACK

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1938	*	*	*	*	1,025	17,811	53,864	2,097	235	6	2	...	75,040
1939	...	...	...	48	189	29,386	43,124	616	19	...	...	...	73,382
1940	...	...	...	...	206	59,639	85,885	3,063	11	1	...	...	148,805
1941	...	...	...	299	1,052	23,536	39,193	1,615	50	...	...	...	65,745
1942	...	...	...	...	13	12,624	41,301	1,477	60	...	...	...	55,475
1943	...	...	...	...	9	4,525	33,613	1,697	1	...	...	...	39,845
1944	...	...	1	...	16	3,098	11,171	659	126	...	...	...	15,071
1945	...	...	10	51	521	1,507	6,903	498	10	1	...	...	9,501
1946	...	...	...	9	67	7,805	64,704	1,746	21	2	...	...	74,354
1947	...	...	...	...	5	59,378	108,175	3,564	15	1	...	1	171,139
1948	...	...	...	...	...	12,023	117,652	1,849	13	4	...	...	131,541
1949	...	...	...	...	151	9,013	41,619	655	6	...	...	...	51,444
1950	...	...	...	...	...	341	75,784	1,826	42	...	...	...	77,993
1951	...	...	...	...	25	81,045	87,104	1,214	40	...	...	...	169,428
1952	**	**	7	1	3	136,939	47,188	472	34	2	8	**	184,654

* Data not available. Figures for 1938 are from May 7 to Dec. 31, inclusive.
** Counting suspended during winter months.

NOTE: – Escapement of Chums in any quantity occurs only in last three months of year; therefore Chums are listed only in historical table, showing yearly totals.

BONNEVILLE DAM SALMON ESCAPEMENT

Year	Chinook	Steelhead	Silver	Blueback	Chum	Total	Year
1938	271,799	107,003	15,185	75,040	2,117	471,144	1938
1939	286,216	121,922	14,382	73,382	1,168	497,070	1939
1940	391,588	185,161	11,917	148,805	1,729	739,200	1940
1941	461,458	118,087	17,911	65,745	5,270	668,471	1941
1942	403,938	151,345	12,401	55,475	1,865	625,024	1942
1943	313,123	92,131	2,547	39,845	790	448,436	1943
1944	240,763	100,521	4,208	15,071	954	361,517	1944
1945	297,488	120,144	791	9,501	727	428,651	1945
1946	445,743	142,548	3,897	74,354	1,178	667,720	1946
1947	480,376	135,434	11,174	171,139	202	798,325	1947
1948	419,555	139,062	4,081	131,541	3,636	697,875	1948
1949	277,697	119,285	1,004	51,444	2,028	451,458	1949
1950	357,375	114,079	10,153	77,993	1,069	560,669	1950
1951	331,788	140,689	5,201	169,428	1,051	648,157	1951
1952	420,879	260,990	7,768	184,654	1,505	875,796	1952

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FOOD FISH FACTS

PRODUCERS and primary marketers of Pacific fish products for 50 years have looked to the *Pacific Fisherman Yearbook* for the facts and records of the industry.

They have honored the *Yearbook* over the years by calling it "The 'Bible' of the Fish Business."

Of recent years, American buyers, notably shrewd and quick to seize that which can serve them, have come to an appreciation of the producers' Food Fish Facts book, and have found that it can be the buyers' tool as well, serving them also by meeting their need for information.

Studies of the *Yearbook's* circulation growth show the rise of this new group in its readership, and demonstrate that the buyers today are using the *Yearbook*, as producers and distributors have been doing for half a century.

This growing interest on the part of buyers for the great chains, the jobbers, the supers and the voluntaries, as well as the field brokers who sell to them, seems to stem from the modern buyer's insatiable demand for information about everything he buys; and from the successful seller's desire to keep sharp on his subject.

Conceiving that the buyers want generalized facts as well as figures, and basic background behind his statistics, these pages present *Facts for Use* on the four principal Pacific fish products, and seek to catch something of the *Color of Fishing* on the Pacific, where is canned 84% of the fish and shellfish production of the United States.

The Big Four

FOUR Pacific fish products account for a very large percentage of the canned fish production of the United States—on the order of 80% by either volume or value in 1951—and that includes *all* food fish and *all* shellfish.

These four dominant varieties are: Salmon, Tuna, California Sardines and Mackerel.

DOMINANCE of the Pacific in American canned fished production is demonstrated clearly in the following figures for 1951 canned fish production. They are entirely normal figures, as 1951 showed no deviation from the trend.

1951 U.S. CANNED FISH AND SHELLFISH VALUES

State	Value
California	$122,572,382
Alaska	80,748,052
Washington	27,312,377
Oregon	15,454,209
Total Pacific Coast	$246,087,020
All other States	55,123,295
Total U.S.	$301,210,295

The Anadromous Salmon

SALMON are *anadromous* fish — which means that they live most of their lives in the sea, but return to fresh water streams to spawn. There, the young are hatched and reared through their early months; until they are ready to migrate to the sea.

Where they go at sea no man knoweth—for sure, although it appears that they generally remain comparatively close to the land masses.

Of the five distinct species of Pacific salmon, one—the Pink—returns from the sea in its second year; the Silver in the third; Kings, Reds and Chums largely return in their fourth year, but they may come in the third to the sixth summer of life.

Pacific salmon die immediately after spawning. In this they differ from the Atlantic salmon, which return to the sea. To spawn but once and die is the fate of all Pacific salmon. Science knows not a single instance where such a salmon has lived more than a few days after spawning.

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"Swiftsure" — Alaska Chinook
"Dainty Miss" — Fancy Spring Pack Chinook
"Challenger" — Medium Red

"All Sea" — Fancy Coho
"Sea Ranger" — Pink
"Gavin's" — Pink
"Sea Leader" — Chum
"Bandana" — Chum

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Chinook or King, biggest of the salmon, but smallest factor in pack.

Range of Salmon

SALMON are taken commercially all around the Pacific Rim from Monterey, Calif., north and west as far as the mouth of the Yukon River where it flows into the Bering Sea; and down the Asiatic coast as far as the northern Islands of Japan.

Being fish of the cold seas, they are rich and fat; and the longer the streams into which they run, the fatter the fish, for it is in the nature of the salmon that he takes no food once he has set himself upon his spawning migration and entered the stream where he will breed and die.

This stream, by the way, and making nominal allowance for Nature's right to break a rule now and then in the interest of Evolution, is the very one where the salmon which return there to spawn were spawned themselves.

The Homing Instinct holds in salmon, and brings them back to their parent stream, as the swallow returns to her nest and a Scot to the Hebrides.

5 Salmon — All Good

FIVE kinds of salmon are there—each distinct in size and color, home and habit; and the product canned from each species likewise is distinct from that of other salmon, as lumber cut from the oak and the maple, ash, hickory and birch differ in appearance, in use and in price.

And just as there are varying degrees of quality in the wood of trees growing in certain latitudes and soils—and cut at certain seasons of the year—so within the species there are differences of quality reflecting geographic and seasonal distinctions.

These quality variations are complicated and not subject to fixed rules. In general, however, four points may be made with respect to them:

1. Salmon are in their prime as they stop feeding and leave the sea en route to their freshwater spawning grounds. This is the time when they carry the most fat, the brightest color of flesh. Thus the quality of the salmon within species tends to decline with the progress of the migration.

2. The condition of salmon tends to vary with the period of time which would have elapsed before spawning if the fish had not been caught. Thus, the earlier in the season, the longer the period before spawning, and the better the quality of the fish.

3. The changes in the fish as it progresses toward spawning and as the season advances are natural processes. While they result in somewhat lower quality than those of prime fish, such as less fat, paler color of the flesh, and some darkening of the skin, there is nothing unwholesome about late-run fish.

The same thing is true between the several species. Because Chum salmon is light in color does not mean that it is in any way unwholesome.

Because birch is lighter in color than walnut is does not follow that the birch is low-grade. The highest quality birch in the world is light in color. Just so the finest Pink salmon in the world is pale when compared with Sockeye.

4. In general, quality of salmon varies with the length of the streams to which the fish return. This is because the salmon do not eat after they leave the sea, and while in saltwater they store-up the fat to sustain themselves in their spawning migrations. Thus the salmon running to long streams usually are very fat, for they have far to go; and it is axiomatic that the quality of salmon within the several species varies with the amount of fat.

Chinook Salmon is King

CHINOOK salmon is often known as King. It is the largest of the salmon and the most widely distributed. It was the first salmon canned, but for many years has made-up the smallest segment of the pack. This is due primarily to the demand which Chinook or King salmon finds in the fresh, frozen and smoked trade.

Chinook salmon takes its name from the Indian tribe which the Discoverers found living at the mouth of the Columbia River, but the species ranges from Monterey Bay, Californian, along the coast to the Yukon River, flowing into Bering Sea. Essentially a fish of the long rivers, Chinooks favor such streams as the Sacramento, Columbia, Fraser, Skeena, Stikine, Copper, Kuskokwim and Yukon Rivers, although they are found in most coastal streams.

The Chinook is a salmon of anomalies:

It is the largest salmon, averaging near 25 pounds, but mature fish may range from 9 to 90 pounds in weight;

It is found farther south—and likewise farther north—than any other salmon;

It generally ranks highest in quality, but may also rank lowest;

Its flesh canned usually is a strong "salmon" red in color, but may be pure white;

It usually is priced at the top of the list, but may also be found at the bottom.

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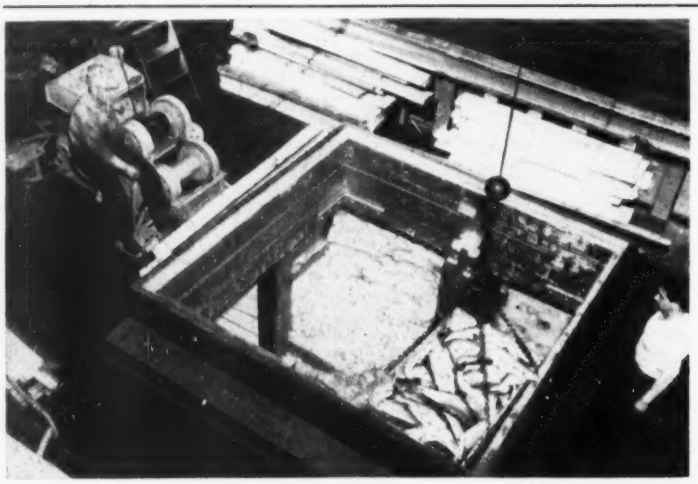

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The Pink is Pink

PINK salmon is pink.

Smallest in size, largest in volume packed, the Pink is one of the bread-and-butter staples.

Admittedly light pink in color, with little free oil, the canned product nevertheless is one of the protein food bargains. Flavor is mild, always acceptable. Nourishment in terms of protein is as high as any salmon.

Price of first-quality Pinks is lower than any other salmon save Chum.

Geographical range of the Pink salmon is the shortest of any of the species. The Pink is not taken south of Puget Sound—no reason known; he just isn't. From Puget Sound north the species is abundant all the way out to the tip of the Alaska Peninsula.

The streams of British Columbia and Southeast Alaska attract the heaviest concentration of the Pink.

This little salmon, rarely over five pounds in weight, is distinct among all the Pacific salmon in that the life-cycle is invariably two years. No other salmon has so short a span, and the Pink apparently never has a longer one.

Pink salmon runs are marked by their periodicity, certain years being heavy and others light. Thus, in one district the Pink salmon runs of the odd-numbered years may be much heavier than those of the even-numbered. In another district the reverse may be true. Fortunately for the continuity of supply, these periodic swings are sufficiently balanced to smoothe the curve of total production, although the tendency is for American Pink salmon production to be heaviest in the odd-numbered years.

This results in large degree from the strange situation which prevails with respect to Pink salmon on Puget Sound, where the trend to periodicity is most marked.

Where in most Pink salmon districts there is a tendency for alternate runs to swing up-and-down, on Puget Sound it is a condition of on-and-off. Odd-numbered years bring a heavy run of Pinks; even-numbered years bring none at all.

Reason? Obscure; scientists do not agree; and efforts to establish a run in the even-numbered years by transplanting eggs from other districts have not as yet been productive of substantial results, although this undertaking has been tried in one way and another for many years—and continues.

Here is one of the world's great challenges for the biologist—an opportunity offering a reward of fantastic value.

The Regal Red Sockeye

RED salmon is the same species that is called Sockeye in some waters. Name differences usually indicate the area from which the salmon came, and possibly quality distinctions associated with regional variations.

In Alaska, where the major portion of the pack of this species originates, the fish commonly is called the Red salmon; but on the Copper River it is known as Sockeye. This latter term prevails throughout British Columbia and on Puget Sound; but on the Columbia River the Sockeye takes the name of Blueback.

Whatever the name, and wherever caught, this species is highly esteemed. The flesh is firm, and highest in color of any of the salmon. The fish is small, rarely over 7 pounds in weight, but particularly suited for canning. It finds little demand in the fresh or frozen trade.

The Red salmon is not taken further south than the Columbia River—which is probably due to the lack of large lakes on the rivers entering the Pacific south of this great stream.

Outstanding feature in the specialized life history of the Red salmon, as distinct from the other four Pacific salmon, is that the young Reds must have a lake in which to pass the early months of their lives. The parent Red spawn in the streams above or below lakes, the young fish making their way into the lakes as soon as they emerge from the gravel. There they spend one to two years before passing to sea.

The Red salmon takes its name from the fact that the skin of the fish, save for the head and tail, turns a brilliant red color at the onset of spawning—and not from the color of the flesh, although the name is doubly suitable on that account.

The name Sockeye is a corruption of the Indian name for this species and has nothing to do with a sock-in-the-eye, the eye socket, or other direct connotation.

Pink Salmon—smallest in size, largest in production.

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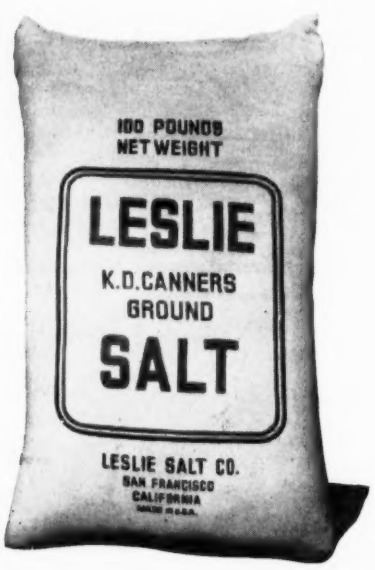


Silvery Silver salmon, marketed as "Medium Red" or "Coho"; a flashy fighter.

The Silvery Silver

SILVER salmon is often known in the canned salmon trade as Medium Red, because the color of its flesh falls only slightly below that of the Red or Sockeye. Another name is Coho, derived from an Indian term.

This fish resembles the King in several respects, notable being that the two species are the only Pacific salmon which can be caught commercially by hook and line. This is due to the fact that the Chinooks and Silvers are predatory upon other fish; while the Reds, Pinks and Chums are plankton-feeders, living upon the small creatures that inhabit the sea. Thus man has no bait for them, and they no appetite for man's lures.

The Chinooks and Silvers are savage fighters, however, and the sportsman esteems them highly.

Silvers are taken from Northern California north to Central Alaska in a scattered fishery. They are a minor element of most salmon runs, generally being taken with other species except in the mid-fall months, and nowhere constitute a dominant population.

Like the King salmon, the Silver may vary widely in quality in different districts and seasonally as well. For this reason the species often sells at a price range of as much as several dollars per case on the basis of color, firmness and fat.

Seasons for Salmon

SEASONAL production of salmon results because these ocean-dwelling fish become available to the fisherman only as they approach the coast en route to the streams as, at the peak of their condition, they begin their spawning migration.

Although in some waters salmon are available to a limited extent at almost all times during the year, the period of the principal fishery is rather limited in extent.

Chinooks are taken commercially over the longest season, particularly on the Columbia River, where commercial fishing runs from May 1 until the end of November, with intervening closures to provide spawning escapement.

Some runs, however, are very short; and this is particularly true in Alaska. The Bristol Bay Red salmon run occurs within the period of a month. In southeast Alaska the Pink salmon run also peaks within a period of a few days.

As a broad, general rule it may be said that:

1. All production of Red and Pink salmon occurs during late June and the months of July and August.

2. Perhaps half of the Silver and Chum pack is put up in July and August, with the balance in October and November.

3. Chinook salmon production runs from May through August.

In this matter of seasonality, and the extremely short periods into which much of the packing must be concentrated, lies one of the perplexing cost problems of the salmon canner. He must provide cannery capacity and crew capable of packing a year's run of salmon in a few days. (In some years the legal packing season in Southeast Alaska has been limited to as few as 12 days.) The fish may come in a swift, tremendous run—and they may not come at all—but the cannery must be there and fully manned, or the pack may be lost.

Salmon Canning Process

CANNING salmon is a relatively simple process. The fish fresh from the sea are sorted as to species as they are unloaded from the boat. The fish are dressed by the "Iron Chink" machine, inspected and then passed to the can-filling machine, where they are cut into sections the height of the can, which are filled into the can lengthwise at the rate of about 240 cans per minute.

From the fillers the cans pass over a weighing machine which detects and ejects short-weight cans. These lightweights are corrected by women who inspect all cans for satisfactory filling. Just before the cans pass into the vacuum machines they are given a measured amount of salt for seasoning. The cans are closed in a machine where the tops are attached while a vacuum is maintained in the can.

After the sealed cans are washed they are placed in flat metal trays which are stacked one on the other and then wheeled into a retort, where the cans undergo a process cook in steam under pressure. From the retorts the cans are again washed and then allowed to cool in a warehouse before being run through the labelling and casing machines which finally prepare the goods for market.

5 Basic Fishing Methods

FISHING boils down to five basic methods—and all fishing for any species is done by one or the other of these means.

The five methods are:

Entanglement—As in gillnetting, the oldest and most widely used form of net fishing;

Entrapment—As in the salmon trap, the fyke net, or the Indian's primitive dip net;

Encirclement—As in the purse seine, the most effective form of fishing for species with a schooling habit;

Hook and Line—As in salmon trolling at sea;

Spearing—A primitive form still used by some Indians, but also basically the method by which whales are harpooned.

Salmon are taken by all five of these basic methods, but

spearing today is of no importance; and hook and line fishing produces only a very small fraction of the canned salmon pack. Commercial trolling for salmon supports a very large Pacific fishing fleet, but the salmon taken by this means are particularly esteemed for the fresh, frozen and smoked salmon trade, comparatively few of them being canned.

The North American salmon pack is made from fish taken by means of gillnet, trap and purse seine.

Gillnetting is used principally in the vicinity of streams, where muddy water tends to conceal the net, which the fish strikes at speed, becoming entangled in the linen or nylon meshes.

Salmon traps are confined almost entirely to Alaska. They are of two types, floating and standing traps. In each instance the trap operates on the principle of the maze. It consists of walls of wire webbing arranged in such manner that the swimming salmon is led progressively into enclosures from which escapement becomes more and more difficult. Floating traps are suspended from a framework of logs floating on the surface. Standing traps are rigged on piling driven into the bottom in comparatively shallow water.

Purse seines were developed by the salmon fishermen of Puget Sound, and now serve throughout the world for the production of fish which tend to school near the surface. In brief, the process is this:

A school of fish is detected near the surface. The seiner encircles the school, paying out the net as it goes. When the circle has been completed and both ends of the net recovered it is closed at the bottom by hauling in a rope which runs through runs at the bottom of the net. This serves to close-off the means of escape and the fish are finally crowded into a pocket of the net and brailed into the boat with a giant dip net.

Canned Fish Tariffs

TARIFFS on imported canned fish products competing directly with American goods have come in for close consideration in recent years, particularly in the case of tuna.

The tariff rates on the principal imports affecting American canned fish are:

Tuna, canned in oil—45% ad valorem, based on the value in the country of origin.

Tuna, canned in brine—12½% ad valorem, based on the value in the country of origin.

Tuna, frozen (for canning in U.S.)—No duty.

Bonito, canned in oil—15% ad valorem, based on value in the country of origin.

Salmon, canned—15% ad valorem, based on the value in country of origin.

Salmon, fresh or frozen—½c per lb.

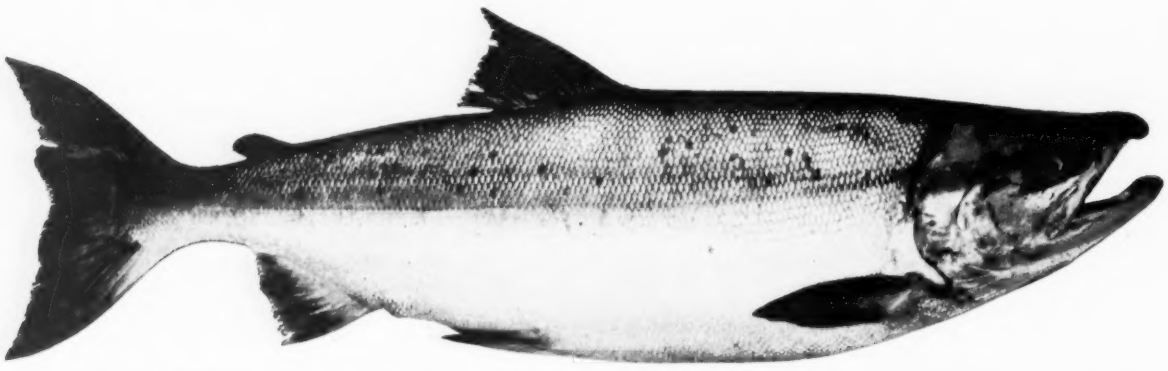
Chum a Protein Bargain

CHUM salmon are third in abundance among the five Pacific salmon, and lowest in price.

As with Pinks, Chums suffer in the market and in public demand through the paleness of the canned product. This lowers their market value, although it does not in any way imply poor condition or nutritional lack.

Chums are taken over a wide range, from southern Oregon to the Yukon River. In general, they tend to run late in the season, as they usually spawn in the shorter streams. For these reasons, Chums are lean; and tend to take-on the coloration of the spawning migration comparatively early.

Admittedly never fancy, canned Chum salmon is a low-priced staple which offers the convenience, flavor and nourishment of canned salmon at bargain prices. Its low cost is in no respect an indication of any lack of wholesomeness.



Chum Salmon, a bargain in nutritional value; pale of flesh, but protein-packed.

How This Little Fish Goes to Market

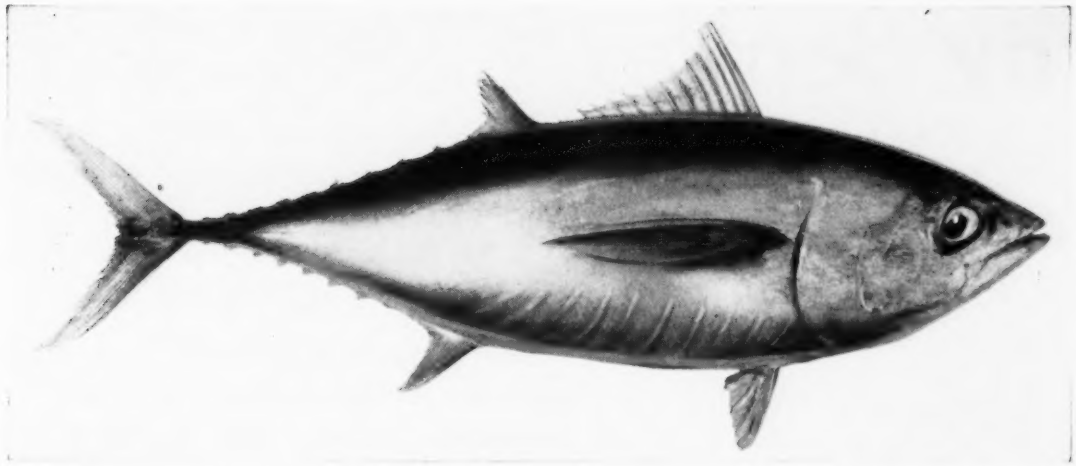
PROCEDURE in sending fish to market varies widely with the product. In some instances canned fish are labelled, cased and loaded into cars for shipment as soon as they are cool from the retorting.

In other products—notably Alaska salmon—there are numerous necessary steps which must be taken, affecting the availability of the product, so that actual shipment may not be possible for a considerable period after the season opening.

In the first place, Alaska salmon is packed in a relatively remote region with only occasional steamship service. Furthermore, the season may be open legally for some time before a substantial run of fish arrives; and even after the fish has been packed it may be many days before a vessel calls to carry it to Puget Sound.

Once it reaches Seattle, the salmon must be inspected. This has not been possible previously because of the remoteness of the region in which it is packed and the fact that the canneries are scattered widely along the enormous coastline of a sub-Arctic territory.

To expedite movement of the salmon, the Food and Drug Administration accepts findings of the inspection laboratory of the Northwest Branch, National Canners Association, with respect to the condition of the parcels. Once the salmon is inspected, it is certificated to the Federal authorities, the owner is informed of the grade ascribed to it, and it can be cleared for labelling and shipment.



YELLOWFIN—the principal component of the American canned tuna pack.

TUNA—The Fish of Mystery

TUNA is a fish of mystery, about which science knows but little, although it is learning fast. As a matter of fact, there is more than a little difference of opinion as to just what fish should be counted as tuna. All tunas are of the general mackerel family; but there are many members of the family which cannot be counted as tuna.

The tunas are fish of the open sea, although men generally catch them in the vicinity of land masses. Research is beginning to show that this is due to the availability of bait in such areas, and that the fish are concentrated by the presence of the shore and of feed—but that the great tuna populations are scattered widely over the sea.

These are migratory fish, apparently moving over countless miles of sea. Although tuna in the older fisheries generally are found on or near the surface, in mid-ocean they appear to swim deeper and are rarely seen from vessels even though considerable quantities are being taken from the deeper horizons.

We do not know surely where the tunas spawn, nor where they spend their early lives.

We do not have definite information as to how fast they grow, nor how old they are when they enter the fishery. Nor do we know their age at maturity, when they begin to reproduce.

These things are mysteries.

Despite the enormous quantities of tuna which have been caught in recent years, as season after season the fishermen have taken more and more tuna to meet the ever-growing demand, the scientists have found no shred of evidence to indicate the on-set of depletion.

It is true that it has been necessary to build the fleet bigger and bigger, and for the boats to go further and further, but they have been producing larger and larger quantities. By none of the classic indices of depletion have the scientists been able to find any evidence that the world's tuna resource is being damaged.

3 Tunas—and Others

THREE species make up the enormous majority of the world's supply of tuna—Albacore, Yellowfin and Skipjack. There are other true tunas which also have a part, although smaller and quite variable.

These minor species include Bluefin, and the closely related Big-Eye tuna; the Little Tuna, an Atlantic form; and variations of the common Skipjack usually called Oceanic Skipjack.

Only one species—Albacore—is permitted by American food laws to be labelled White Meat Tuna. All of the other species may be labelled as Light Meat Tuna, although there are minor differences in the color of the canned products derived from the several varieties.

All of the tunas are swift and powerful fish, with streamlined, torpedo-shaped bodies propelled by sickle-shaped pectoral fins and a crescent tail. So beautifully are these fish adapted to speed that there are grooves in the sides of their bodies into which the pectoral fins fit, and dorsal fins fold down and disappear completely into a groove in the back to provide the ultimate in streamlining.

Yellowfin—Tuna No. 1

YELLOWFIN is the largest of the tunas commonly canned, although exceeded by some of the big Bluefin taken off Nova Scotia. As a matter of fact, great size is not considered desirable in tuna, as the largest of the species tend to be dark in color and rough in texture. The California law actually limits the maximum—and minimum—sizes of tuna which may be landed, in the interest of maintaining high quality in the product.

The Yellowfin is definitely a fish of tropical and subtropic seas, rarely occurring as far north as Southern California, and generally from there south to the Equator. Its range in Asiatic and Indonesian latitudes is much the same.

Largest in size, the Yellowfin is also the largest factor in the American tuna pack. It is the backbone of the Light Meat Tuna business, although the little Skipjack, smallest of the tunas, is a highly important factor, and second only to Yellowfin in the volume canned.

The Light Meat Tunas are closely similar in the can, and only the expert can tell the species apart on the basis of color and flavor. However, the small size of the flakes in Skipjack often offers a clue to the identity of this species, which also tends to be slightly darker in color than the larger Yellowfin.

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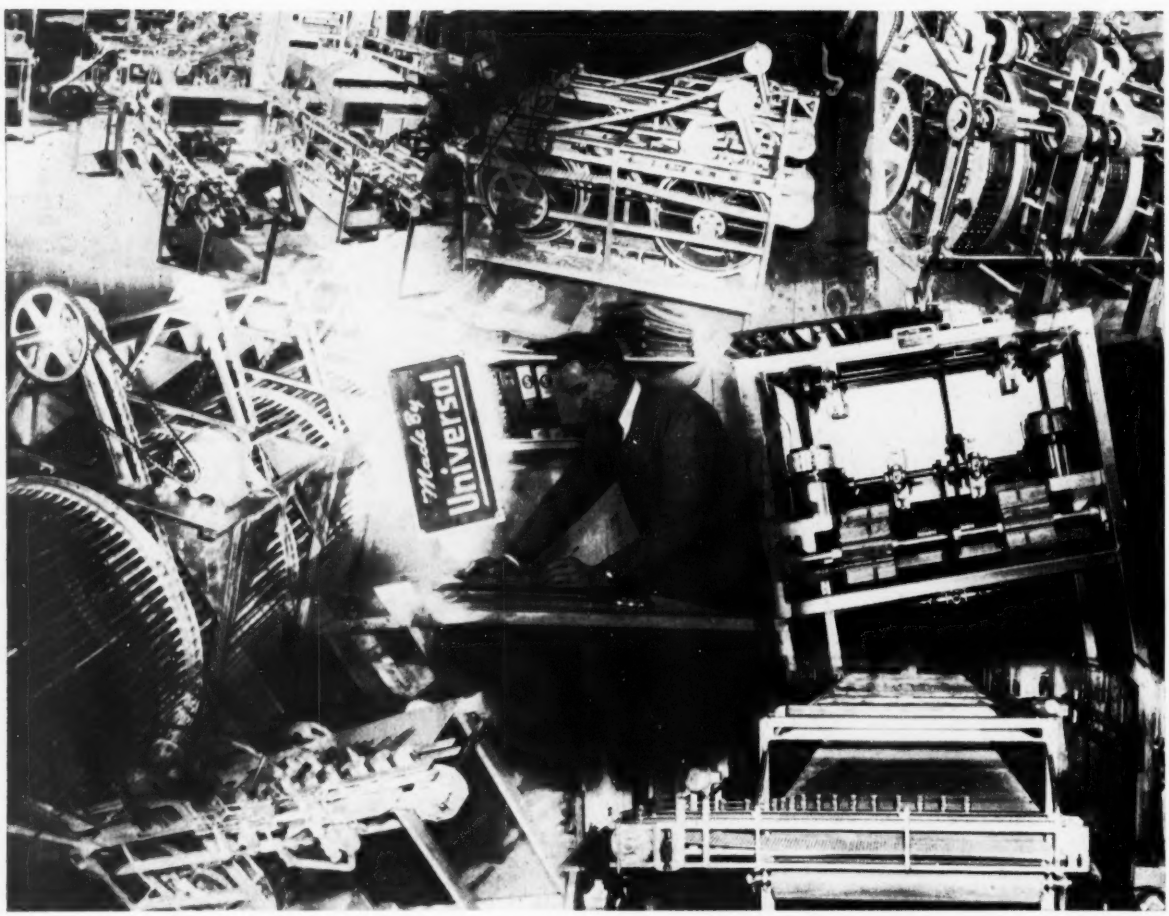

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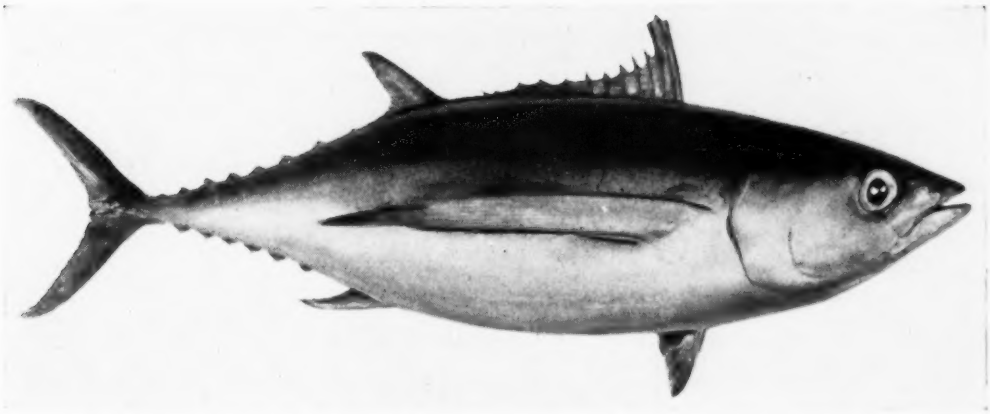

ALBACORE—The White Meat, Long-Finned Aristocrat of the Tunas.

Albacore—White Meat

ALBACORE differs decidedly from the other tunas in the canned product, the flesh being much whiter and firmer than that of the Light Meat Tunas. The fish—which is midway in size between Skipjack and Yellowfin—averaging perhaps 16 pounds—is readily distinguished by the long, sickle-shaped pectoral fins, which are more than half the total length of body.

The flavor of the Albacore is blander than that of the other tunas—although none of the tunas are marked by decided flavor, and none are "fishy".

Albacore tends to be more northerly in its range than the other tunas, occurring in subtropical and temperate waters rather than in truly tropical seas—although in 1952 American scientists were surprised to find some Albacore close along the Equator.

Distribution of the Albacore also appears to be somewhat more limited than the other species. Commercial production of White Meat tuna has been almost entirely in the hands of American and Japanese fishermen as result of this relatively restricted range of the Albacore, which is taken commercially along the coast of North America from mid-Mexico north as far as California—and to a more limited extent as far north as British Columbia.

On the Asiatic side of the Pacific the principal Albacore fishery is off the home islands of Japan.

Then, in addition to these two main areas along the continental coastlines, Albacore are taken in mid-ocean, principally in a vast area north and west of the Hawaiian Islands.

Styles of Tuna Packing

STYLES of tuna pack have changed materially in recent years, particularly as result of the introduction of the "bite-size" or "chunk" pack, which is a compromise between the earlier "standard" pack and tuna "flakes".

In fancy tuna the can is filled with a few large, solid sections of selected loins. Standard tuna permits not more than a quarter of the total contents to be smaller bits. In the "chunk" or "bite size" pack loins and large portions have been reduced to chunks or bits with a minimum of the smaller fragments found in "grated" or "shredded" packs.

All American canned tuna is packed with the addition of high-grade edible oil, usually cottonseed, soybean or corn oil. Occasionally olive oil is used, but this is only in a specialized style of product called "tonno", packed essentially for the Italian trade.

The oil serves several purposes in canned tuna. It replaces with bland oil the rather strong natural oil which has been removed from the tuna in the pre-cook, thus offsetting any tendency toward dryness. The oil also prevents the tuna from adhering to the tin, and thus serves as a buffer against over-cooking and the development of "scorched" flavors.

American packers do not put up tuna in brine. Large amounts of this product have appeared on the American market in recent years, but they have all been imported goods. Purpose in developing this pack was to take advantage of an unusual provision in the American tariff law which permits tuna packed in brine to enter this country at only a fraction of the duty charged on imports of tuna canned in oil. The slight saving resulting from the elimination of the oil is a matter of small consequence in comparison with the large saving as a result of the lower rate of duty on the brine-packed article.

Tuna Fishing Distinctive

FISHING for tuna is largely done by hook and line—in three principal variations—although a minor part of the production comes from nets. Most American tuna are taken by "clippers", great, beautiful, highly-specialized fishing boats which employ live bait in a unique method of fishing.

A distinctive feature of these vessels are the enormous bait tanks and wells, through which great pumps circulate seawater constantly. Smaller fish—such as sardines and anchovies—are caught and kept in these tanks until the fishing grounds are reached. When a school of tuna is raised a few of the live bait fish are thrown overboard, attracting the school to the vessel, and creating a feeding frenzy in the fish, which then strike wildly at lures trailed on the surface—lures that may be artificial "squids", resembling big trout flies, or simply hooks baited with live sardines.

Fishing is done with heavy bamboo poles and short lines, the fish being jerked over the rail of the clipper. Where the fish of a school are too large to be handled by one man, lines from several poles may be bridled to a single hook, as many as four men sometimes fishing together.

Another hook and line method, used only for Albacore, is called jig-fishing, and is essentially the same method as salmon trolling. The boat runs at moderate speed, trolling a number of lures relatively close to the surface, the lines being attached to poles, and fitted with springs and rubber links to cushion the terrific shock of the tuna's strike. The fish are hauled aboard by hand or power "gurdy".

The Japanese make extensive use of a form of hook and line fishing called "flag-line fishing"' This method is used in off-shore waters where the tuna rarely come to the

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surface, and consists essentially of a long set-line bearing many baited hooks, and usually fished several hundred feet below the surface.

This method is not now employed by American fishermen, but may come into use as recently-discovered offshore tuna resources are brought into production.

American purse seiners take tuna successfully at certain times and in certain waters, but the method has not proven practicable under all conditions. The gear used is long, deep and heavy, but the method is essentially the same as that used in purse seining other schooling species.

Refrigerated—Right Now

REFRIGERATION is applied to tuna immediately they are aboard the vessel because they are taken from the warm seas of the tropics, and must be kept in perfect condition while the vessel completes her cruise, which may run to 100 days.

Modern method of tuna refrigeration aboard the fishing vessel essentially is this:

The hold of the vessel is compartmented into cargo wells, each lined with frost coils served by the refrigeration machinery, and each fitted with pumps for positive circulation of the brine within the wells. Before fishing begins the wells are filled with seawater, to which salt is added in order to make extremely low temperature possible without freezing. This heavy brine is circulated over the coils until it is all very cold. As the fish are caught they are placed in these wells of refrigerated brine, with circulation continued until the fish are frozen through. Then the brine is withdrawn and the fish are maintained in frozen condition by the refrigerating effect of the frost coils.

Thus the fish are frozen immediately upon leaving the water, and are kept in this condition until they reach the cannery.

Tuna Canning Process

CANNING process for tuna is distinctive in seafood packing. The fish are eviscerated without removing the head and are then placed in metal baskets on wheeled racks in a low-pressure retort where they are cooked in steam for a period running up to several hours for large fish.

This pre-cook serves several purposes: (a) excess oil is cooked out of the fish; (b) removal of the skin and simple bony structure is facilitated; (c) separation of the light meat of the tuna loins from the dark meat structure becomes possible.

The clear loins of tuna produced by this preparatory work are ready for packing in cans, a step now mechanized for the great majority of the American pack. While some tuna, particularly Albacore, is still hand-filled, most of the American production is machine-packed.

The filled cans receive measured amounts of high-grade salad oil and salt, and are then sealed, with vacuum established in the can either by pre-heating, steam-jet or vacuum chamber sealing.

The processing cook in a pressure retort follows.

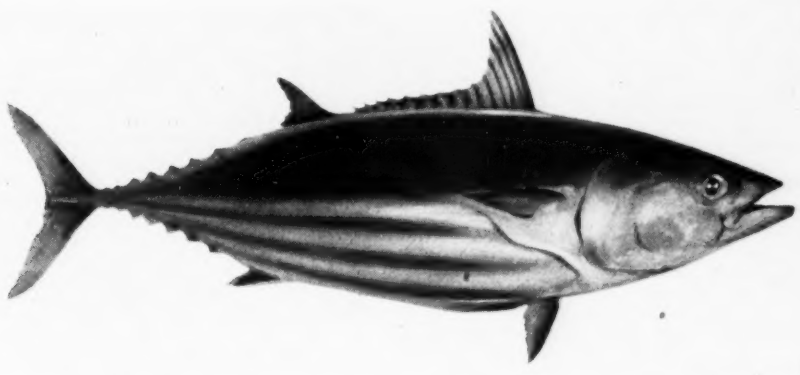
Imports of Tuna

IMPORTS are a factor which cannot be ignored in any consideration of the American tuna business—either producing or distributing. Principal source of imported canned tuna is Japan, although South American countries, Portugal and other countries are factors, and numerous foreign fisheries are developing.

Besides the imports of canned tuna, large quantities of frozen tuna for packing in this country are imported, particularly from Japan. This trade serves greatly to increase the American supply of Albacore, which comprises the majority of the frozen tuna imports.

Imports of canned tuna from Japan were a very definite factor during the '30s; but since the war they have attained volume far outstripping that of earlier years, due doubtless to the very large growth of the American market demand.

Imported canned tuna sold in this country must always be marked with the name of the country of origin; but tuna canned in the United States from imported frozen fish need not be so designated.



SKIPJACK—smallest tuna, second factor in the pack.

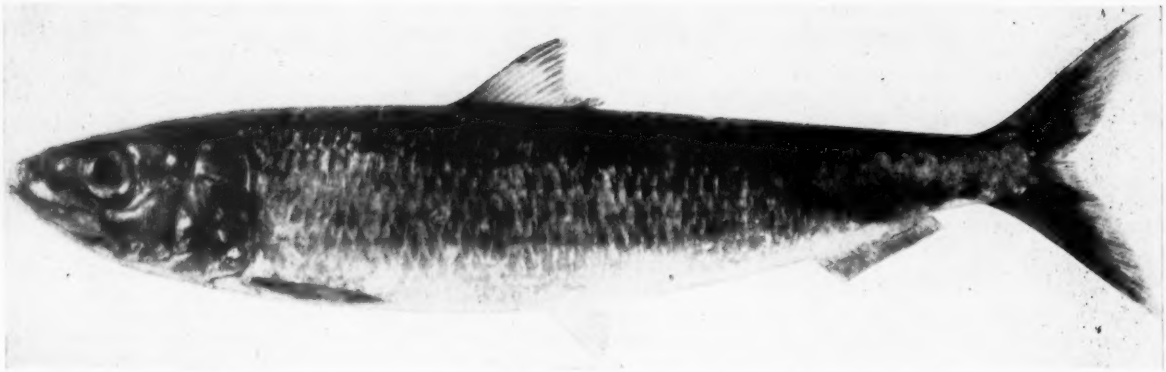
Tuna 'Round the World

TUNA are found the world 'round in the warmer seas. The tunny of the Mediterranean was famous in the days of Rome's glory, still supports a commercial fishery, and provides the basic ingredient of Italian antipasto.

The world's greatest tuna fishery today lies off the west coat of the Americas from the Equator north to Southern California, with seasonal fisheries extending as far north as British Columbia.

On the Asiatic side of the Pacific the Japanese fish tuna from their home islands south beyond the Equator; throughout Micronesia, and also westward into the Indian Ocean.

A Central Pacific fishery is maintained from the Hawaiian Islands; and tuna are being taken commercially to some extent in the North Atlantic, both off North America and Norway. Minor fisheries exist in African waters, and there are at least possibilities of developments in the Caribbean Sea.



California Sardine, once the most abundant American fish; due for a comeback.

Status of Sardines

CALIFORNIA sardines today are a *Problem* and a *Potential* rather than a *Resource*. Only a few years ago the largest -yielding American fishery, the sardines of California waters currently are in a condition of failure. Where a few years ago this fishery yielded the almost incredible quantity of 600,000 tons of fish a year, in 1952 did not reach 6,000 tons.

Reason for this crushing decline is not fully known, even to the most careful scientists. The problem is a complicated one, involving many factors. Mankind has control over some; but none at all over others.

Certainly the problem is not being neglected, or the potential destroyed.

Once the seriousness of the situation was evident, the California sardine industry in all its elements consolidated its forces and asked the state to tax the industry in order to provide for a long-range, ocean-wide, profoundly-deep study of the sardines, the factors affecting the population, the elements contributing to its rise and decline, the steps necessary to bring about restoration, and a program required to maintain abundance, once again established.

This program, now under way for several years, is the most extensive research undertaking ever conceived and applied by man to the solution of problem in aquatic biology.

Financed by the state largely from levies on the industry, the California Marine Research program involves separate investigations by the California Department of Fish and Game; the Hopkins Marine Laboratory of Stanford University; the U.S. Fish and Wildlife Service; the Scripps Institution of Oceanography; and the California Academy of Sciences.

Where the research will lead even its scientific directors do not know. The California sardine industry knows only this:

The California sardine resource can be restored by sound conservation methods. Research can ascertain what these methods are; and will be continued until it does so.

What *Are* Sardines?

SARDINES are not a certain kind of fish, speaking strictly. Sardines are small fish of the herring family, packed according to certain specialized principles of preparation.

Properly understood, this fact accounts for the wide range in size and character between the tiny Portuguese sardines and the large ones of California; between the medium-size sardines packed in Maine and those produced in Norway.

Scientifically, the California Sardine is a Pilchard, and is so called in Europe—even in the Pacific Northwest and British Columbia.

But the pilchard is a member of the herring family; and when it is canned in a manner which removes much of the natural oil and moisture in the fish it becomes a sardine—legally, commercially and actually.

The same is true if one starts with small herring instead of pilchards; or with sprats.

On the other hand, Federal regulations will not permit the use of the large California anchovies in a pack labelled as sardines, even though the process is identical and the character of the finished product so similar that only an expert can distinguish one article from the other.

Anchovies, you see, do not belong to the herring family, which is one of the essential requirements for fish which aspire to the "sardine" label.

Sardine Canning Process

CANNING of California sardines went through a long process of development before the present technique became fixed. Very first use of the fish for canning utilized only the very small sizes of fish and packed them after the European style.

About 50 years ago, actually in 1903, sardine canning along lines roughly similar to those standard today was begun in Monterey. The original processes, and those which followed them, were quite crude, but for perhaps 20 years the method has changed but little, although equipment has been greatly improved.

California sardines generally are canned after this manner:

Ovals—Immediately after they are delivered by the fishing boats the sardines are put through "cutting" machines, which remove the head and extract the viscera by means of suction, the tail being trimmed off at a point which will permit the fish to fit properly into the can.

The fish are then placed in the cans by hand, belly up; and the uncovered cans are carried on a wide balanced-weave wire belt into a pre-cooker where the fish are cooked by steam. Emerging from the cooker, the cans run through a machine which inverts them on a wire belt, permitting the oil and moisture which has been cooked out of the fish to drain away. The cans are then righted, filled with a measured amount of hot tomato sauce, and carried into a machine where tops are seamed to the cans before they continue to the retorts for the sterilizing process cook.

Talls—Where sardines are canned in 1-lb. talls, or other cylindrical cans, they generally are filled by an ingenious machine instead of by hand. In this pack they are often canned without the addition of tomato sauce, such a pack being called "Natural" style.

Where and How Caught?

CALIFORNIA sardines are taken close along the Pacific Coast from the southern tip of the Mexican peninsula of Lower California north to Vancouver Island; but the great fishery and the great canning industry of California is closely concentrated in two areas: Los Angeles Harbor and its vicinity; Monterey Bay and north to San Francisco.

Although some commercial sardine operations have been conducted both north and south of California, it is in these two sectors of the California coast that Nature formerly concentrated the sardines in such prodigious numbers as to yield catches of 600,000 tons annually.

The fish are taken primarily by means of purse seines, this form of gear having emerged as most effective among a number of other forms of fish nets.

Operations are conducted almost entirely at night, for the presence of the schools of fish near the surface is revealed in the darkness by the phosphorescent glow of the school in the water.

Because darkness assists in emphasizing this glow, fishing is suspended during the period of the full moon each month. Fishing then is difficult and unrewarding, and fishermen must rest and nets be mended also.

Legal seasons limit sardine fishing in the Monterey-San Francisco district to the period from August 1 to January 15; while in Southern California fishing is permitted from October 1 to February 15.

Tuna Seasons

TUNA fishing is seasonal in but slight degree. Tuna migrate seasonally, to be sure, but they are available to the American fishermen in some waters throughout the year.

The summer months are the periods of heaviest production; and constitute the season at which tuna are available in waters near and adjacent to the American coast.

Albacore do not appear within the limits of the American fishery until early in the summer, but usually continue within reach of the fishermen until autumn is well advanced, with July, August and September the months of peak production.

Yellowfin and Striped tuna are taken throughout the year in waters worked by the American fleet, but the northerly swing during the summer brings the schools closer to the California bases, permits the boats to make shorter trips, with resultant higher production.

Mackerel is Big Business

MACKEREL canning on the Pacific Coast is big business, in 1952 producing more than 1,500,000 cases—each of 48 pounds—of canned food. This lets mackerel rank with the largest canned fish items packed in the United States, although it has scant recognition.

The pack does not often run as large as in 1952, which was one of the big years in the industry's history, but it is always substantial.

All Pacific Coast mackerel canning is done in California, and most of it in Southern California, although on occasion substantial runs occur in the vicinity of the great packing center at Monterey.

The mackerel pack is composed of two varieties of fish —Pacific Mackerel and Jack Mackerel. The two varieties yield closely similar canned products, preferences generally being accorded the Pacific type. The price distinction, however, is never great.

The two fish are easy enough to tell apart as they come from the water, but in the can there is little difference.

Mackerel Canning Simple

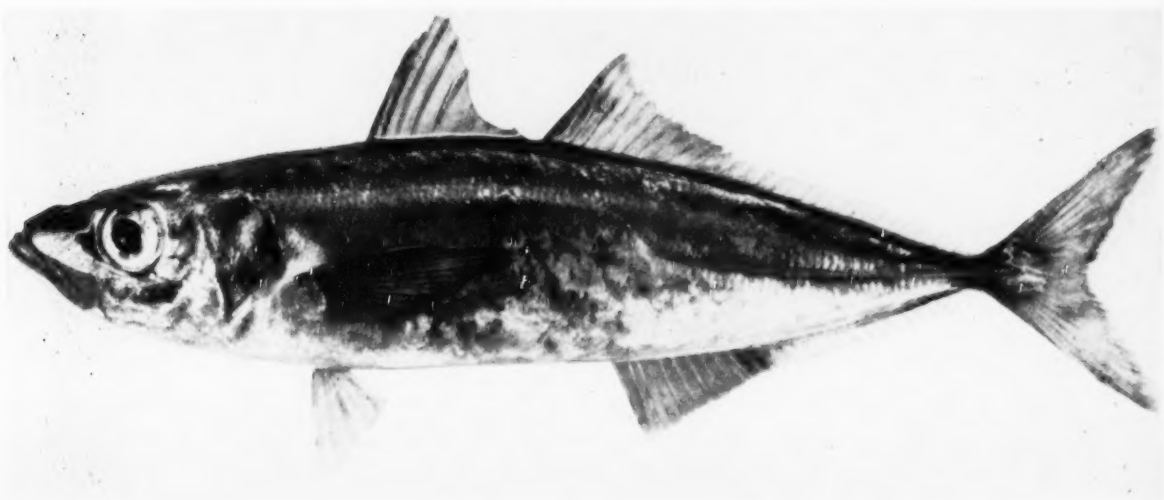
CANNING process for mackerel is relatively simple. The fish are dressed on machines of the same type as are used in the case of sardines, and usually are brined for a time for the double purpose of seasoning the fish and whitening the flesh.

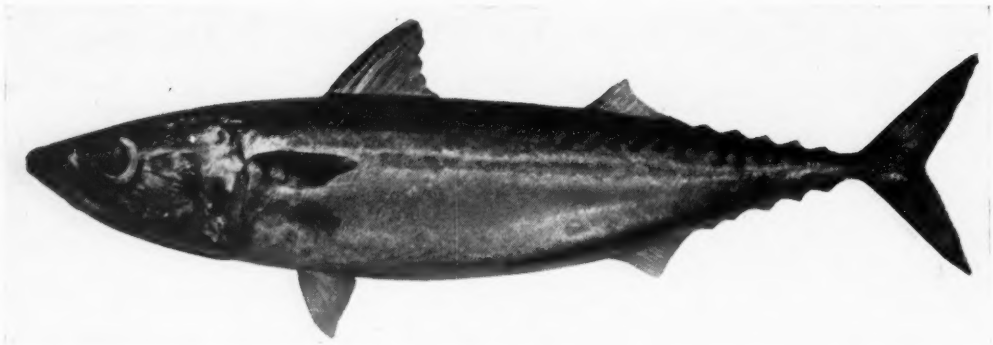
Filling is done by hand, with the pieces of fish being alternated in the can to produce as solid a fill as possible. The fish generally are filled with some excess extending above the edge of the can. The filled cans then pass into a pre-cooker similar to that used in the case of sardines.

This cook in steam without pressure serves to release excess moisture from the fish and also to soften the structure. Then, as they pass to the can-closing machine, the cans are carried under a plunger unit which presses the fish down into the can. This action (a) compacts the fish to form a solid cylinder in the can; (b) forces out excess of moisture; (c) provides the headspace necessary in the can.

As the cans have been subject to pre-cook, no vacuum process is necessary in closing. After the can tops have

Jack Mackerel—a fast-coming factor in American fish packing.





Pacific Mackerel—one of the leading elements in U. S. canned fish.

been seamed on, the cans are given the usual sterilizing process cook.

In some variations of the process described above, the mackerel may be packed in oval cans with tomato sauce, or they may be drained after the pre-cook and tomato sauce added to the tall can.

Seining and "Scooping"

PURSE seines are the dominant element in production, although "scooping" is a picturesque element which cannot be ignored. The seines and seiners used in this fishery are identical with those employed for sardines, and the 1952 abundance of mackerel went a long way toward compensating the fishermen for the dearth of sardines.

The fish are taken off the coast of Southern California, generally from the Channel Islands south to the international boundary. Fishing often is done within a few hundred yards of the beach, but it may extend 20 to 30 miles off-shore.

"Scooping" mackerel is a specialized form of fishing which takes advantage of the voracious character of the fish and their fearlessness while feeding.

The "scooper" boat has one or more little platforms hung over the rail, while one or more barrels of ground raw fish or "chum" are carried on deck. Once fish are found, they are attracted close to the boat by dribbling the "chum" into the water—and then are taken by the "scooper", working a long-handled dipnet from the platform. While this is a primitive form of fishing, it is surprisingly effective on mackerel, and requires a minimum of investment in fishing gear.

Container Change Trends

EVOLUTION of Pacific fish canning in 1952 produced several changes in containers, and in the thinking with respect to them which may over the years prove of prime importance.

Tendency toward smaller units—in cans and in cases—has become manifest.

In fact this trend had its beginnings several years ago, and some companies for a decade or more have packed a substantial portion of their salmon output in cases of 24 cans. A few years ago this practice gained ground in the canned crab and oyster field, and today the majority of these products are believed to be marketed in cases of 24 cans.

With 1952 the practice of selling salmon—particularly the higher grades—in cases of 24 took a sharp advance.

Similarly, there has come into being a definite movement toward the employment of somewhat smaller cans. Oyster packers several years ago found that the buffet tin was particularly popular with the trade, and today it has come to account for a large portion of the pack.

In 1951 some crab canners experimented for the merchandising of crab canned in "tuna size" halves, 6½ oz. net weight. They used the same size tin as is the standard package for canned tuna, instead of the half-pound flat which for years has been used for salmon.

By 1952 the smaller tin had proven so generally acceptable to the trade that a large percentage of the pack of canned crab went into the "tuna size" can; while predictions are that in the future this will be the dominant package for canned crab.

A somewhat similar trend has been manifest in the case of fancy salmon, with some production on the Columbia River in "tuna size" tins in 1952. The market success of the innovation is not yet apparent. Thinking in connection with the change is that the large number of cans of tuna on the grocery shelves makes it desirable to have fancy salmon available to the buyer on a basis as closely comparable as possible, both in size and in price.

Less definite, and still in the preliminary stage, is the proposal of some salmon operators to revise salmon can sizes generally, even in the case of the 1-lb. tall can which has been the standard package for this product since the beginning of canning. Some merchandisers think that salmon should follow a trend which they find general in American grocery products toward a smaller tin than the 1-lb. unit, possibly 12 oz., and perhaps wider as well as shorter than the present tall salmon can.

Such a transition would be fundamental and very expensive. Whether it will come about is still altogether uncertain; but the matter continues under serious study.

"Tuna-Like Fishes"

TUNA-LIKE fish is a term often noted in official reports of tuna production and particularly tuna imports. This refers primarily to bonito and yellowtail—but usually to the former. These fish are closely related to the true tunas, and yield rather similar products, which find a market as lower-priced substitutes for tuna. However, under Federal regulations these fish may not be marketed in the United States labelled as tuna.

Both bonito and yellowtail are packed to a limited extent by the California tuna canners.

The principal source of "tuna-like fishes" for the American market, however, is the production of South American countries, notably Peru, where a substantial local industry has been developed for the canning of tuna and bonito. Chile and Ecuador also have minor but growing industries in this field.

The South American bonito is recognized as a particularly high grade of this species and the product packed from it has achieved important acceptance in the United States, where it has become a factor to be reckoned with in the national market.

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FRENCH *Sardine Company, Inc.*

TERMINAL ISLAND, CALIFORNIA

J. J. BOGDANOVICH
PRESIDENT

TUNA

American tuna canning topped all previous records in 1952 with a pack of 9,239,275 cases, 1,000,000 cases above the pack for 1951, and just about 250,000 cases above the previous record, set in 1950.

California tuna canning fell about 60,000 cases short of the 1951 figure, but American tuna canning outside California topped 1,000,000 cases for the first time, with more than 200,000 cases canned on the Atlantic Coast.

CALIFORNIA tuna canning exceeded 8 million cases in 1952 for the second time in history, although the state's production fell narrowly below the 1950 record of 8.14 million.

The year showed a heavy swing in favor of the Los Angeles Harbor area, where the pack of 5.4 million cases was more than twice as great as the San Diego production of 2.4 million. This condition traced to a number of causes, among them being the greater volume of tuna imports packed at the northern port.

Monterey and San Francisco added 115,000 cases to the state total.

65% of Total Pack in Chunk-n-Flake Styles

Composition of the California tuna pack between the solid—fancy, standard and tonno—grades on the one hand and the divided—chunks, grated, flakes, etc.—grades on the other provides an interesting study.

The California Albacore pack was divided almost equally between the solid and the divided types of packing.

In the case of Lightmeat tuna, on the other hand, the divided packs actually accounted for 70% of the total.

Taking Whitemeat and Lightmeat together, 65% of the California tuna pack of 1953 was composed of the divided types of pack: "bite-size," Chunks, grated and flakes and light-and-dark.

American Pack Outside California Tops Million

American canneries outside California packed more than 1 million cases of tuna in 1952 for the first time in history. The best previous pack outside the state is believed to have been that of 1944.

Of the outside—California pack of 1,157,000 cases, Pacific Northwest Albacore canning accounted for 588,000 cases. Lightmeat tuna canning in the Pacific Northwest and Hawaii aggregated 365,000 cases; and tuna canning on the Atlantic Coast is estimated to have produced 203,000 cases.

The Atlantic Coast pack was made largely from frozen tuna imported from South America and Japan, although the local Atlantic fishery added some tonnage of Bluefin and Little tuna.

1953 California Tuna Prices Slightly Higher

As this 1953 *Yearbook* went to press an agreement was concluded between the American Tunaboat Association and some of the principal tuna canners calling for a slight upward

1952-UNITED STATES TUNA PACK-1952

Region	(Cases) Albacore	Lightmeat	Standard Cases Total True Tuna	Bonito and Yellowtail	Grand Total	Region
California						California
San Diego	683,074	1,782,286	2,465,360	21,878	2,487,238	San Diego
San Pedro	1,024,612	4,261,652	5,286,264	192,907	5,479,171	San Pedro
Monterey and San Francisco	115,568	...	115,568	...	115,568	Monterey and San Francisco
Total California	1,823,254	6,043,938	7,867,192	214,785	8,081,977	Total California
Hawaii, Washington and Oregon combined lightmeat tuna	...	365,372	365,372	...	365,372	Hawaii, Washington and Oregon combined lightmeat tuna
Oregon	487,563	...	487,563	...	487,563	Oregon
Washington	101,363	...	101,363	...	101,363	Washington
Total Pacific Northwest and Hawaii	588,926	365,372	954,298	...	954,298	Total Pacific Northwest & Hawaii
Total Pacific Coast	2,412,180	6,409,310	8,821,490	214,785	9,036,275	Total Pacific Coast
Total Atlantic Coast	* 101,500	* 101,500	203,000	...	203,000	Total Atlantic Coast
GRAND TOTAL U. S. TUNA	2,513,680	6,510,810	9,024,490	214,785	9,239,275	GRAND TOTAL U. S. TUNA

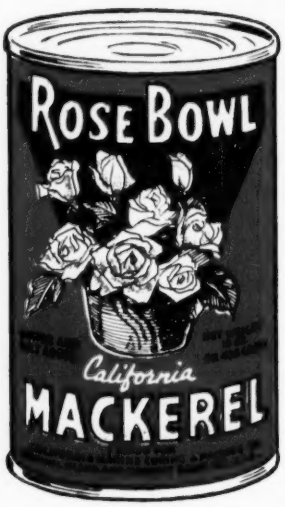
* Arbitrarily divided equally between Lightmeat and Albacore. Largely packed from frozen imports, with some local Atlantic production of Bluefin and Little Tuna.

SETTING NEW STANDARDS for QUALITY and CONSUMER ACCEPTANCE

Easy to Remember!

Easier to Sell!

CALIFORNIA MARINE CURING & PACKING CO.



J. R. BARRY & CO.

EXCLUSIVE SALES AGENTS

Terminal Island, California

727 West Seventh St., Los Angeles, Calif.
Telephone MAdison 6-9291

California Pack of Canned Tuna and Related Fishes

YEAR	Cases									YEAR
	SAN PEDRO DISTRICT				SAN DIEGO DISTRICT				GRAND TOTAL	
	Light Tuna	White Tuna	Other Tuna*	TOTAL	Light Tuna	White Tuna	Other Tuna*	TOTAL		
1912	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	75,900**	1912
1913	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	77,500**	1913
1914	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	217,000**	1914
1915	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	237,365**	1915
1916	315,880	82,593	6,457	404,930	71,062	13,593	245	84,900	489,830	1916
1917	382,273	118,769	11,928	512,970	140,563	17,261	12,746	170,570	683,540	1917
1918	228,241	82,801	87,110	398,152	50,129	. . . .	73,072	123,201	521,353	1918
1919	487,812	144,383	65,008	697,203	62,318	47,869	24,572	134,759	831,962	1919
1920	668,012	‡	1,534	669,546	167,633	‡	1,623	169,256	838,802	1920
1921	72,410	255,194	. . .	327,604	27,869	82,157	48	110,074	437,678	1921
1922	334,733	166,496	3,651	504,880	129,349	27,269	23	156,641	661,521	1922
1923	312,187	209,591	17,803	539,581	224,315	88,014	4,869	317,198	856,779	1923
1924	134,497	278,855	113,401	526,753	27,207	106,958	11,382	145,547	672,300	1924
1925	323,422	358,940	116,149	798,511	187,909	95,007	11,936	294,852	1,093,363	1925
1926	380,074	43,660	150,185	573,919	188,649	14,578	56,280	259,507	833,426	1926
1927	381,541	105,598	231,751	718,890	436,700	20,916	30,368	487,984	1,206,874	1927
1928	473,868	99,093	128,374	701,335	473,704	658	21,581	495,943	1,197,278	1928
1929	394,819	130,212	146,104	671,135	700,020	2,426	55,284	757,730	1,428,865	1929
1930	658,728	143,748	130,159	932,635	950,461	1,783	35,510	987,754	1,920,389	1930
1931	394,668	144,796	85,653	625,117	543,536	177	10,303	554,016	1,179,133	1931
1932	385,399	52,215	88,112	525,726	606,608	. . . .	15,655	622,263	1,161,151	1932
1933	341,290	49,391	71,388	462,069	877,124	. . . .	52,980	930,104	1,392,173	1933
1934	714,546	82,182	116,526	913,254	982,547	. . . .	31,509	1,014,056	1,927,310	1934
1935	808,578	107,501	230,772	1,139,851	1,222,894	4,648	109,323	1,336,875	2,476,727	1935
1936	840,151	53,849	153,107	1,047,107	1,392,531	35	147,509	1,540,075	2,587,182	1936
1937	881,208	83,123	260,016	1,224,346	1,680,720	8,036	105,211	1,793,967	3,018,314	1937
1938	697,804	265,034	233,766	1,196,604	1,282,571	24,355	95,202	1,402,128	2,598,732	1938
1939	982,225	281,666	262,367	1,526,258	1,633,113	46,372	70,917	1,750,402	3,305,297	1939
1940	1,110,181	122,484	315,778	1,548,443	2,045,071	19,304	251,623	2,315,998	3,868,394	1940
1941	554,782	73,024	235,910	863,716	1,372,594	10,145	274,643	1,657,382	2,530,169	1941
1942	594,056	128,670	97,901	820,627	1,164,524	104,578	146,234	1,415,336	2,242,220	1942
1943	554,928	187,052	234,382	976,362	699,099	227,347	394,265	1,320,711	2,308,415	1943
1944	805,081	125,632	270,821	1,201,534	760,263	307,806	537,889	1,605,958	2,809,177	1944
1945	825,377	148,286	503,118	1,476,781	1,518,646	329,251	128,686	1,976,583	3,456,442	1945
1946	1,170,791	141,629	646,615	1,959,035	2,023,870	233,622	332,529	2,590,021	4,555,397	1946
1947	1,317,016	104,726	733,587	2,155,329	2,576,804	145,300	418,797	3,140,911	5,357,498	1947
1948	1,264,615	290,811	771,182	2,326,608	3,096,315	462,255	406,248	3,964,818	6,346,952	1948
1949	810,362	289,063	1,458,374	2,557,799	2,967,150	535,013	449,413	3,951,576	6,590,396	1949
1950	1,024,410	586,683	2,673,668	4,284,761	1,412,220	482,894	1,961,297	3,856,411	8,141,172	1950
1951	3,143,863	580,377	77,229	3,801,469	3,015,164	409,819	10,260	3,435,243	7,530,264	1951
1952	4,261,652	1,024,612	192,907	5,479,171	1,782,286	683,074	21,878	2,487,238	8,081,977†	1952

† Minor quantities of tuna canned in Monterey, San Francisco and elsewhere in northern California have been included in the grand total. Figures are for standard cases of 48 halves or equivalent. Figures for final year are temporary totals from official sources. Data for previous years have been corrected according to official statistics of the California Department of Fish and Game.

*"Other Tuna" through 1950 includes Bonito, Yellowtail, Flakes and Tonno. For 1951 and thereafter this column includes only Yellowtail and Bonito, Flakes and Tonno being included in other columns.

**No Segregation available prior to 1916. ‡ Included under other heads.

revision in prices. Skipjack would be purchased at $280 per ton, up $20; and Yellowfin would remain unchanged at $320.

Conclusion of the agreement was followed immediately by wholesale departure of clippers for the first trip of 1953. This situation somewhat resembled that of the year before, although the general release came earlier.

The Southern California tuna industry began 1952 with the fleets of clippers and seiners largely inactive. It was estimated packers had in first hand around 2,500,000 cases. However, this was not cause for alarm as was the carryover in 1951.

Canners, learning a hard lesson from the year before and confronted by huge imports of foreign tuna, raw and canned, were packing only as their needs required.

Consequently a shortage of fancy tuna developed early, and by February 1 practically all restrictions on fleet sailings had been removed.

Fish Prices Variable

The year opened with raw prices in effect as follows: Yellowfin, $310 per ton; Bluefin, $300; Skipjack, $290. However, the Skipjack price shortly was lowered to $260 per ton. A surpurise developed in the opposite direction when Van Camp Sea Food Co. increased the prices of Yellowfin to $320 per ton.

Albacore started the year in late June at $350 per ton; and ended at $400. In the Northwest, $425 was paid late in the season. Bonito and yellowtail found their levels at $175 and $165 respectively.

The tuna purse seine fleet received a blow early in the year when the Mexican government hiked licenses for seine vessels 16-to-70 tons net from $16.11 per ton to $20.95. Trip length between issuing and renewal of licenses was reduced from 70 to 50 days. John Real, general manager, Fishermen's Cooperative Association,

Hawaii, Oregon and Washington Lightmeat Tuna Pack

Year	Fancy and Standard			Chunks, Flakes, Grated			Grand Total	Year
	Halves 48	Quarters 96	Total Cases	Halves 48	Quarters 96	Total Cases		
1952	184,571	9,750	194,321	163,466	7,585	171,051	365,372	1952
1951	496,408	13,137	509,545	**	**	**	509,545	1951
1950	332,871	9,256	342,127	163,899	4,170	168,069	510,196	1950
1949	...	...	*129,848	...	...	*73,978	*202,826	1949
1948	...	...	93,335	...	...	56,738	150,073	1948
1947	...	...	60,793	...	...	33,189	93,982	1947

Note:-Quarters are counted on the basis of 8 dozen per case for statistical purposes, although normally packed 24 to the case.

** Included with "Fancy and Standard".

*Figures for 1949 and years previous are for lightmeat tuna production in Oregon and Washington only. Production for Hawaii is not included in the records for these previous years.

No other Tuna Packer

gives you a "family" of

EAGERLY-BOUGHT PROFITABLE TUNA PRODUCTS!

1

2

3

4

5

These same items also packed under our WHITE STAR Brand label.

VAN CAMP SEA FOOD CO., INC.
Terminal Island, California

1952-CALIFORNIA TUNA PACK BY MONTHS-1952

(Cases)

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total Cases "As they run"	Total Cases Basis 48-½'s.
Albacore - Whitemeat														
Solid Pack	4,524	11,802	27,908	47,838	53,855	35,907	216,345	236,474	104,743	109,231	51,217	7,470	907,314	
Standard Pack	...	2,060	101	534	968	...	3,773	4,872	2,182	1,490	508	1,000	17,488	
Chunk Pack	888	11,431	13,256	6,848	9,501	4,386	111,824	218,313	116,567	56,400	32,060	3,735	585,209	
Grated & Flakes	1,472	4,964	8,118	14,256	18,691	9,395	72,534	95,130	44,840	36,289	13,855	2,490	324,034	
Dark & Light	...	...	602	694	1,804	132	215	1,940	391	177	69	245	3,269	
Tonno	...	...	...	...	...	1,480	6,441	1,435	833	43	62	...	10,294	
Total Whitemeat	6,884	30,257	49,985	70,170	84,819	51,300	411,132	558,164	269,556	205,630	97,771	14,940	1,847,608	1,823,254
Lightmeat														
Solid Pack	71,360	37,690	86,722	142,294	134,244	190,637	121,680	133,327	127,611	112,504	96,818	151,401	1,408,288	
Standard Pack	4,096	10,803	5,311	15,032	6,805	13,652	15,045	17,487	21,124	9,494	2,288	8,052	129,189	
Chunk Pack	59,467	61,971	217,194	267,611	249,292	354,091	294,789	310,220	370,080	285,947	198,877	302,086	2,971,625	
Grated & Flakes	73,804	51,549	85,783	124,395	131,294	193,498	115,028	191,456	149,986	139,298	67,205	98,934	1,422,230	
Light & Dark	5,797	5,704	494	6,796	9,051	3,393	8,962	2,106	3,805	3,801	3,494	4,924	58,327	
Tonno	3,565	...	6,540	11,345	13,985	7,034	5,174	29,542	16,736	9,241	8,531	16,211	127,904	
Total Lightmeat	218,089	167,717	404,044	567,473	544,671	762,305	560,678	684,138	689,342	560,285	377,213	581,608	6,117,563	6,043,938
Bonito & Yellowtail														
Solid Pack	...	...	...	...	406	...	...	...	...	...	...	...	406	
Standard Pack	...	22	...	536	2,636	1,334	5,258	23,141	23,403	113	11	...	56,454	
Chunk Pack	...	...	...	...	...	...	...	6,984	1,432	87	135	...	8,638	
Grated & Flakes	17	1,677	567	9,743	...	15,582	11,628	53,607	45,007	7,979	8,364	4,710	158,881	
Total Tuna-like	17	1,699	567	10,279	3,042	16,916	16,886	83,732	69,842	8,179	8,510	4,710	224,379	214,785
Grand Total	224,990	199,673	454,596	647,922	632,532	830,521	988,696	1,326,034	1,028,740	774,094	483,494	601,258	8,189,550	8,081,977

San Pedro, hurried to Mexico City in an effort to get an adjustment.

Opening quotations for canned, f.o.b. West Coast were: Advertised brands: White Meat, fancy, $16.00; Light Meat, fancy, $14.75. Private label: White Meat, fancy, $13.50 to $14.25; Light Meat, fancy, $12.50.

The year ended with December quotations as follows: Advertised brands: White Meat, fancy, $15.00 to $16.00; Chunks, $13.50; Light Meat, fancy, $14.75; Chunks, $13.00 to $13.50. Private label: White Meat, fancy, $14.00 to $15.00; Light Meat, fancy, $13.00 to $13.50; Chunks, $11.50 to $12.00; Grated, $9.00.

Purse seine fleets had a much improved year over 1951, when only around 13,000 tons was delivered by the netters. In 1952 the gross catch was approximately 27,000 tons. The Bluefin catch increased also to close to 3,000 tons for the year.

Cannery Line-up Shifts

Important changes took place in the fish-cannery structure in Southern California. At San Diego a consolidation of interests reduced the number of tuna plants operating to four, the California Tuna Canning Company ceasing operations as such.

Events began when Jack Crivello, executive vice president, resigned from and sold his interest in Westgate-Sun Harbor Company, to be followed later by the resignation and disposal of interests of W. Wade Ambrose, president.

The California Tuna Canning Company was purchased by the same interests acquiring controlling stock in Westgate-Sun Harbor and Earl M. Nielsen resigned as president to devote himself to canned-tuna brokerage, taking with him several labels. "Sea-Preme" however, went to the new consolidation, but was finally discontinued when decision was made to concentrate on national sales of "Breast O' Chicken" brand. Under the new consolidation, James B. Lane, former vice-president of Westgate-Sun Harbor became president; Kenneth J. Berglund, executive vice president and William L. Robinson, vice president, charge of production. Glenn Martin became secretary-treasurer; Harold Requa, Jr., continued as director of sales promotion.

Meanwhile, circumstances—the big plant at Long Beach was slowly sinking below water level—forced West Coast Packing Corporation to move its tuna-packing operations to its branch, the former People's Packing Corporation plant at San Diego.

In a deal made with the Westgate-Sun Harbor principals, a straight

Tuna Prices Per Ton Paid Fishermen

YEAR	Albacore	Yellowfin	Bluefin	Skipjack	YEAR	Albacore	Yellowfin	Bluefin	Skipjack
1917	$30	$50	$45	$40	1935	125-160	100	90	80
1918	125	90	80	40	1936	Nominal	105-110	95-90	85-90
1919	200	90	80	40	1937	215	120	110	100
1920	300	90	80	40	1938	215-130	120	110	100
1921	145	80	80	60	1939	125	110	100	90
1922	250	100	80	60	1940	140	110	110	100
1923	300	80	75	60	1941	140	110-130	110-120	100-110
1924	360	80	80	60	1942	300-400	190	180	170
1925	200	80	80	60	1943	325	200	190	180
1926	175	110	110	75-80	1944	325-390	200	190	180
1927	Nominal	110	90	75	1945	390	200	190	180
1928	$200 up	120	90	75	1946	390-440	200-280	190-270	180-260
1929	300	120	110	70-80	1947	410-600	310-340	300	290-320
1930	200	120	110	90	1948	550-740-425	340	330	320
1931	200	120-100	90	90-80	1949	400-350	340-310	330-300	320-290
1932	200	80	75	70	1950	400	310	300	290
1933	200	100	90	80	1951	400-250-300	310	300	290
1934	200	100	90	80	1952	350-400	320	310	260

NOTE: — Prices quoted are per ton of round fish in good condition landed at cannery dock. All fish rejected by inspectors, either as landed or after precooking, are deducted from the gross weight.

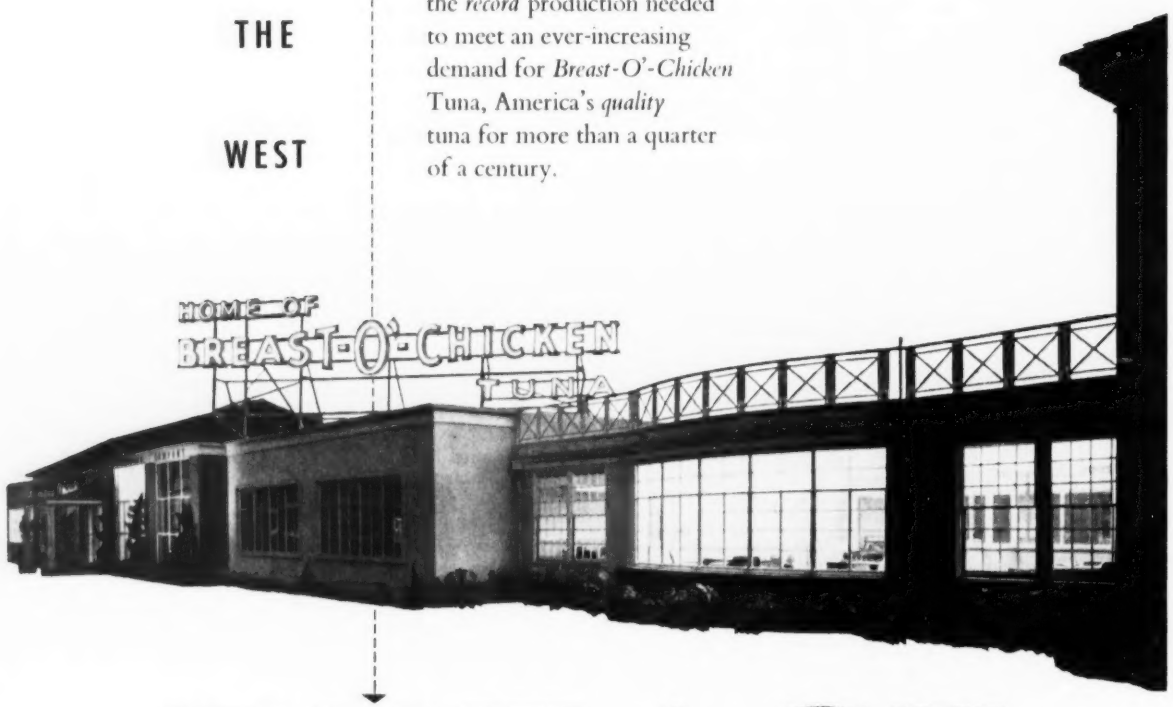
Figures given undertake to state the prevailing market level.

Where a range in prices is shown it represents a definite change in market level in the course of the season, the movement being from the first to the second figures stated. Quotations for 1943 through 1945 are OPA ceiling prices for cannery fish, and represent the total amounts which may be paid the fishermen in cash or allowances, save for the cost of war-risk insurance The lower figures in 1946 are ceiling prices and the higher represent levels attained after removal of OPA controls.

THE SHOW CANNERY OF THE WEST

Here are the most sanitary conditions known to the tuna industry. Tile walls, stainless steel equipment. Large, bright, air-conditioned workrooms. *Breast-O'-Chicken's* new million-dollar tuna cannery in San Diego is the show cannery of the West.

Designed for efficiency, this new cannery guarantees the *record* production needed to meet an ever-increasing demand for *Breast-O'-Chicken* Tuna, America's *quality* tuna for more than a quarter of a century.



BREAST-

westgate-sun harbor company

O'-CHICKEN

san diego, california

TUNA

IMPORTS OF TUNA CANNED IN BRINE*

(Quantities in Pounds)

	1948	1949	1950	1951	1952 10 mos. Jan.- Oct.	
Peru	185	23,112	205,944	643,231	398,174	Peru
Japan	...	11,250	73,235	8,601,133	17,118,641	Japan
Chile	12,596	40,432	75,721	...	...	Chile
Portugal	...	...	11,651	...	...	Portugal
Angola	...	...	7,496	61,507	95,601	Angola
Italy	...	2,149	3,367	...	...	Italy
Port. Africa	...	...	3,443	...	...	Port. Africa
Other	103	2,414	60	66,673	121,113	Other
TOTALS	12,884	79,357	380,917	9,372,544	17,733,529	TOTALS

*Includes minor amounts of tuna not in oil canned in combination with other substances, such as soy sauce. Source: U. S. Tariff Commission.

transfer of properties were made whereby West Coast moved into the former San Diego Packing Company plant—later operated by California Tuna Canning—while an expansion program more than doubling the packing capacity of the People's Packing plant was made by Westgate-Sun Harbor, whose former cannery was abandoned.

Great New Cannery

One of the most important developments of the year was the completion and dedication of French Sardine Company immense Star-Kist No. 4 plant at Terminal Island. With seven great packing lines, the plant, featuring every modern food-packing device and equipment, employs 700 women packers. It cost in the neighborhood of $2,500,000, and is devoted entirely to packing the company's "Star-Kist" tuna brand.

Of importance toward the latter end of the year was the appointment of Gilbert C. Van Camp, Jr. to be executive vice president, as direct assistant to his father, Gilbert C. Van Camp, president.

At Southern California Fish Corporation, Larry W. Holland succeeded H. P. Christian as president. He had been with this cannery since 1921 mostly as vice president in charge of production. In the fall, his son Major Larry Holland returned from two years in Korea as a fishery expert to the U. S. Army, and resumed his position as assistant to the president and fleet manager.

Association Becomes Co-op.

In association circles, Capt. Tony Barcott of the *Coral Sea* succeeded himself as president of the Fishermen's Cooperative Association of San Pedro. Carmen DiMassa was elected vice president; Slavko Ivancic was named treasurer for a fourth term. John Real continued as general manager, with Dorothy Evanisevich as association secretary.

At San Diego, Capt. Sam Crivello of the *Sun Europa* and owner of the Union Oil marine service dock, was elected president, American Tunaboat Association. Harold Morgan, Sr., was chosen vice president. Harold F. Cary

Landings of Tuna in California

CAUGHT IN UNITED STATES WATERS

Year	Albacore	Bluefin	Bonito	Skipjack	Yellowfin	Total Pounds
1926	2,469,861	6,526,533	2,942,906	14,217,018	2,695,502	28,851,820
1927	4,455,372	4,898,386	1,121,476	5,802,598	595,247	16,873,079
1928	283,321	13,700,870	1,335,533	4,396,132	84,626	19,800,482
1929	269,056	7,476,370	593,886	8,032,077	199,444	16,570,833
1930	283,117	15,598,892	3,866,496	3,015,275	35,553	22,799,333
1931	37,322	2,356,775	3,014,135	11,965,616	154,024	17,527,872
1932	619,694	460,044	1,676,487	375,042	165,323	3,296,590
1933	487	324,216	1,967,244	10	6,867	2,298,824
1934	171,105	18,291,721	3,003,048	. . . . .	19,514	21,485,388
1935	2,386,249	18,495,813	2,263,740	1,907,916	529,007	25,582,725
1936	956,771	13,808,578	2,216,679	8,456,751	767,231	26,206,010
1937	3,196,770	10,822,071	5,707,212	1,884,148	187,732	21,797,933
1938	12,492,675	16,512,262	4,684,570	2,816	10,566	33,702,889
1939	12,342,671	9,318,978	6,697,249	2,718,641	457,405	31,534,944
1940	5,587,790	18,849,968	3,553,069	2,985,111	237,527	31,213,465
1041	3,276,257	8,848,147	7,200,496	4,214,373	1,739	23,541,012
1942	7,997,293	10,331,506	861,841	217,838	1,315	19,409,793
1943	11,885,815	7,663,887	801,535	17,904	2,058	20,375,199
1944	8,091,207	16,072,045	326,175	43,676	45,373	24,578,476
1945	9,505,544	14,139,076	339,664	93,078	5,159	24,582,521
1946	9,101,600	15,529,229	582,948	1,747,060	32,653	26,993,490
1947	7,387,173	14,755,622	384,315	893,046	3,234	23,423,390
1948	10,499,390	1,693,760	214,992	319,194	593	12,727,929
1949	20,471,694	2,266,236	99,874	26,331	9,884	22,874,019
1950	38,170,909	9,339	33,456	12,421	1,461	38,227,586
1951	13,281,748	837,209	54,047	590	63	14,173,657

CAUGHT IN WATERS SOUTH OF THE INTERNATIONAL BOUNDARY

1926	60	. . .	178,698	6,734,330	9,869,484	16,782,572
1927	123,995	. . .	596,532	28,003,362	25,338,798	54,062,687
1928	. . .	. . .	770,370	11,551,972	32,168,580	44,490,922
1929	45	50,487	2,324,658	18,974,936	37,245,480	58,595,606
1930	. . .	6,322,390	1,297,764	17,470,312	56,618,628	81,709,094
1931	. . .	1,177,255	65,538	4,541,145	36,425,456	42,209,394
1932	. . .	611,162	1,185,799	21,261,535	36,758,087	59,816,583
1933	. . .	236,276	284,955	16,687,298	51,068,763	68,277,292
1934	. . .	66,107	199,646	14,830,194	60,893,646	75,989,593
1935	61,279	6,677,270	5,632,744	15,289,270	71,765,126	99,425,689
1936	. . .	5,116,305	4,999,237	18,549,354	77,585,413	106,250,309
1937	. . .	1,871,851	2,100,858	45,219,944	91,334,726	140,527,379
1938	29,919	1,215,769	3,155,423	22,650,815	78,277,578	105,329,504
1939	4,187	2,516,737	3,221,626	27,402,250	109,960,396	143,105,196
1940	880	1,120,300	1,737,895	53,665,044	113,660,682	170,184,801
1941	. . .	670,865	3,057,106	21,371,095	76,700,021	101,799,087
1942	2,623,900	2,513,058	788,848	38,497,344	41,166,126	85,589,276
1943	9,499,049	2,514,283	1,480,349	28,875,880	49,259,270	91,628,831
1944	9,774,659	4,259,966	492,696	29,920,701	62,190,656	106,674,678
1945	12,262,037	6,454,983	2,374,517	33,180,329	86,125,497	140,397,363
1946	8,962,447	6,502,519	5,042,700	39,130,247	126,393,035	186,033,948
1947	5,758,607	6,082,012	13,312,856	51,422,403	149,063,560	225,639,438
1948	25,926,456	4,835,047	8,920,134	58,433,122	191,635,058	289,749,817
1949	23,545,320	2,123,235	1,729,667	78,537,699	184,962,401	290,898,322
1950	23,575,512	2,729,624	662,158	124,712,144	182,222,961	333,902,399
1951	17,396,183	3,025,209	722,756	115,778,333	160,547,865	297,470,346
1952	68,258,000	4,176,000	2,110,000	89,860,000	185,848,000	350,252,000

GRAND TOTAL POUNDS

1926 — 45,634,392	1934 — 97,474,981	1943 — 112,004,030
1927 — 70,935,766	1935 — 125,008,414	1944 — 131,253,154
1928 — 64,291,404	1936 — 132,456,319	1945 — 164,479,884
1929 — 75,166,439	1937 — 162,325,312	1946 — 213,027,438
1930 — 104,508,427	1938 — 139,032,393	1947 — 249,062,828
1931 — 59,737,266	1939 — 174,640,140	1948 — 302,477,746
1932 — 63,113,173	1940 — 201,398,266	1949 — 313,772,341
1933 — 70,576,116	1941 — 125,340,099	1950 — 372,129,985
	1942 — 104,999,069	1951 — 311,644,003

NOTE: — Segregation of 1952 landings as to origin not available.
All fish caught in U.S. waters were caught in California waters, except the following, which were caught off the Oregon-Washington coast: Albacore, 11,176 lbs. in 1936; 1,176,754 lbs. in 1937; 7,702,795 lbs. in 1938; 4,078,562 lbs. in 1939; 3,255,858 lbs. in 1940; 854,103 lbs. in 1941; 448,446 lbs. in 1942; 48,030 lbs. in 1948; 30,396 lbs. in 1950, 9150 lbs. in 1951.

"OLDEST AND TOP TUNA LABEL IN THE INDUSTRY!"

ESTABLISHED 1892

"BLUE SEA" ...IS OVER 50 YEARS OLD! THE LABEL IS A PLEDGE OF UNIFORM HIGH QUALITY FOR OVER A HALF CENTURY OF PACKING CALIFORNIA FISHERY PRODUCTS.

Every case of fish packed by Southern California Fish Corporation is designed to win new customers and to keep the business of old friends.

"BLUE SEA"
CANNED TUNA

"Blue Sea"
SARDINES

Our Newest Product:
"BLUE SEA" Tuna and Noodles in Mushroom Sauce

"Blue Sea"
MACKEREL

"Sunset" and "Senorita" Sardines and Mackerel

We Will Welcome An Opportunity To Serve Your Requirements

SOUTHERN CALIFORNIA FISH CORPORATION

"First Name in the Southern California Industry"

TERMINAL ISLAND — Larry W. Holland, PRESIDENT — CALIFORNIA

1952-IMPORTS OF CANNED TUNA-1952

Countries	Pounds												
	Nov. 1951	Dec. 1951	Jan. 1952	Feb.	March	April	May	June	July	August	Sept.	Oct.	Total
ANGOLA, Total	17,416	4,704	...	...	...	...	5,600	42,607	...	6,593	10,737	7,944	95,601
In Oil	...	...	...	...	...	...	...	...	...	...	...	...	...
In Brine, etc.	17,416	4,704	...	...	...	...	5,600	42,607	...	6,593	10,737	7,944	95,601
JAPAN, Total	2,016,625	1,498,387	2,466,022	1,421,361	1,947,192	2,026,370	1,620,265	1,519,146	1,718,533	1,622,692	2,156,788	2,281,094	22,294,475
In Oil	156,034	223,808	771,131	308,094	554,170	322,483	157,141	126,694	90,971	339,274	1,673,146	452,888	5,175,834
In Brine, etc.	1,860,591	1,274,579	1,694,891	1,113,267	1,393,022	1,703,887	1,463,124	1,392,452	1,627,562	1,283,418	483,642	1,828,206	17,118,641
PERU, Total	140,771	66,096	5,844	53,372	13,500	64,157	43,685	23,793	4,200	...	...	17,654	433,072
In Oil	12,823	...	2,178	35	1,800	...	3,600	...	...	...	...	14,462	34,898
In Brine, etc.	127,948	66,096	3,666	53,337	11,700	64,157	40,085	23,793	4,200	...	...	3,192	398,174
PORTUGAL, Total	...	...	...	...	2,094	...	1,058	...	688	2,149	...	5,376	11,365
In Oil	...	...	...	...	2,094	...	1,058	...	688	2,149	...	5,376	11,365
In Brine, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...
OTHERS, Total	29,726	17,671	1,425	5,073	2,659	33,958	2,435	26,848	8,864	710	...	56,950	186,319
In Oil	27,491	8,377	1,425	1,441	2,659	2,542	2,435	4,941	2,114	710	...	11,071	65,206
In Brine, etc.	2,235	9,294	...	3,632	...	31,416	...	21,907	6,750	...	...	45,879	121,113
Total	2,204,538	1,586,858	2,473,291	1,479,806	1,965,445	2,124,485	1,673,043	1,612,394	1,732,285	1,632,144	2,167,525	2,369,018	23,020,832

continued as general manager; Dr. W. M. Chapman, as director of research.

The ATA changed its corporate setup in late 1952, changing to a cooperative, but retaining its original name. It began functioning as a marketing cooperative on January 1, 1953.

Anthony C. Chiappe continued as president, Lower California Fisheries Association, as did Joseph J. Camillo as business manager. A new organization of small fishing-boat owners was formed at Los Angeles Harbor in the California Commercial Fishermen's Association, succeeding the former, Southern California Commercial Fishermen's Corporation.

Of scientific interest during the year was the taking of a tagged Yellowfin by the seiner *City of San Pedro* in July off Mexico; and the finding of two tagged Albacore off Morro Bay.

The seiner's catch was made off Gorda Bank, 325 miles from where a California Fish & Game research vessel tagged the fish March 7, 100 miles south of Manzanillo, mainland of Mexico. The Morro Bay Albacore were taken Sept. 19 and 22, and had been tagged near Catalina Island, out from Los Angeles Harbor.

Internation Affairs Perplex

Ecuador declared a prohibition on foreign vessels taking bait or fishing tuna within its self-imposed 12-mile territorial limit, but continued to issue licenses for fishing within the "area of vigilance" around the Galapagos Islands.

Two Southern California clippers were arrested, the *Equator* and *Sun Pacific*, and heavily fined before release. Dr. W. M. Chapman went to Ecuador and spent several weeks in an effort to reach an understanding between American fishing vessels and the Ecuadorean government.

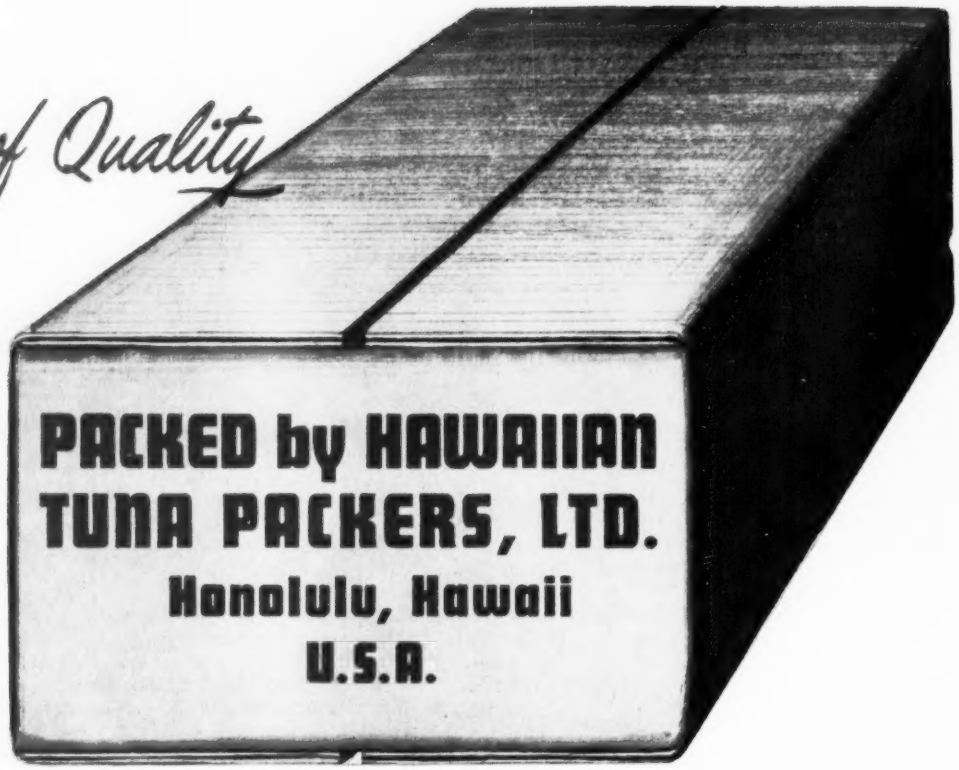
The domestic fleets did not find too much success at banks all the way from Mexico to South America and production fell sharply behind, while imports of foreign tuna and tuna-like fishes, raw and canned continued to climb.

1952 - Southern California Tuna Receipts By Ports - 1952

Month	Yellowfin Tons	Skipjack Tons	Bluefin Tons	Albacore Tons	Bonito Tons	Yellowtail Tons	TOTAL Tons	Month
LOS ANGELES HARBOR								
January	3,707	650	...	122	...	...	4,479	January
February	2,519	760	...	511	15	19	3,824	February
March	5,660	944	...	920	...	7	7,531	March
April	8,369	1,327	...	1,297	...	130	11,123	April
May	8,029	2,545	...	1,579	...	...	12,153	May
June	8,597	1,957	72	681	...	347	11,654	June
July	6,012	2,925	162	2,848	...	104	12,051	July
August	5,453	3,824	1,581	4,870	377	1,533	17,638	August
September	5,684	3,807	102	2,316	506	1,478	13,893	September
October	4,646	3,669	...	2,038	...	117	10,470	October
November	2,106	2,139	...	1,162	5	...	5,412	November
December	4,405	3,590	...	323	6	...	8,324	December
TOTALS	65,187	28,137	1,917	18,667	909	3,735	118,552	TOTALS
SAN DIEGO								
January	137	58	...	...	...	...	195	January
February	515	20	...	...	...	...	535	February
March	1,906	214	...	...	...	...	2,120	March
April	1,988	627	...	50	...	27	2,692	April
May	2,010	242	...	57	...	...	2,309	May
June	4,256	1,243	...	126	...	68	5,693	June
July	2,089	1,124	47	4,067	...	104	7,431	July
August	3,169	1,684	60	4,779	36	45	9,773	August
September	3,497	2,444	...	1,845	7	26	7,819	September
October	2,359	2,621	...	599	30	51	5,660	October
November	2,768	2,442	...	59	61	111	5,441	November
December	1,784	3,002	5	9	1	150	4,951	December
TOTALS	26,478	15,721	112	11,591	135	582	54,619	TOTALS
Southern California Totals	91,665	43,858	2,029	30,258	1,044	4,317	173,171	Southern California Totals

NOTE:-Table based upon reports of the California Bureau of Cannery Inspection. Some variation will be noted from other tables in this volume, most of which are drawn from official data of the California Department of Fish and Game, which however are for the state as a whole and do not show production by ports. Minor variations between data from the two sources arise because (1) of differences in the practice of the two services as to statistical methods; (2) these data are for Southern California only, while those of the Department of Fish and Game include landings and pack at Monterey and San Francisco also.

Mark of Quality



For more than a quarter of a century this mark has signified dependable quality, representative of the high standards developed by our great American food industry. This year, as always, you'll find the quality of our pack unsurpassed.

Hawaiian Tuna Packers, Ltd.
Honolulu, Hawaii, U.S.A.

SALES OFFICE: 215 MARKET STREET, SAN FRANCISCO

California Albacore Landings by Ports

YEAR & MONTH	(Pounds) Eureka Region	San Francisco Region	Monterey Region	Santa Barbara Region	Los Angeles Region	San Diego Region	Shipments	California TOTAL
1952								
January	...	...	...	...	...	...	203,605	203,605
February	...	...	...	...	...	...	1,220,470	1,220,470
March	...	...	...	...	...	...	1,743,052	1,743,052
April	...	...	...	...	...	...	2,848,488	2,848,488
May	...	...	...	...	...	...	3,117,198	3,117,198
June	...	...	...	...	974	5,325	1,647,800	1,654,099
July	...	2,517	120,316	4,267	3,447,952	8,160,034	4,372,876	16,107,962
August	764,433	72,874	180,320	202,277	4,838,621	9,754,755	5,905,685	21,718,965
September	2,082,824	2,043,166	1,059,795	731,081	2,184,069	3,617,870	375,698	12,094,503
October	575,788	2,676,127	1,006,271	1,148,830	1,244,132	921,730	...	7,572,878
Total	3,423,045	4,794,684	2,366,702	2,086,455	11,715,748	22,459,714	21,434,872	68,281,220
1951								
January	...	...	...	...	151	3,515	96,756	100,422
February	...	...	...	...	...	...	780,960	780,960
March	...	...	...	...	...	...	665,748	665,748
April	...	...	...	...	...	...	1,635,247	1,635,247
May	...	...	...	...	...	...	810,939	810,939
June	...	...	...	...	17,246	140,671	737,467	895,384
July	983	7,451	7,113	9,312	2,018,029	5,446,063	4,624,238	12,113,189
August	4,731	168,326	1,230,220	77,985	3,987,881	8,848,549	5,436,790	19,754,482
September	1,207,626	1,053,953	388,204	35,104	730,439	1,034,756	1,424,539	5,874,621
October	838,154	1,226,181	1,136,274	12,749	185,608	414,116	158,215	3,971,297
November	...	224,470	204,931	14,977	135,556	68,425	1,149,992	1,798,351
December	...	...	...	6,062	29,531	...	...	35,593
Total	2,051,494	2,680,381	2,966,742	156,189	7,104,441	15,956,095	17,520,891	48,436,233
1950 Total	5,600,592	6,895,735	8,738,811	2,891,028	11,957,166	25,662,662	4,378,420	66,124,414
1949 Total	2,815,470	1,505,087	5,125,396	575,011	9,160,902	24,981,262	114,033	44,277,161
1948 Total	732,425	668,205	2,238,782	352,842	7,524,346	24,964,423	1,141,747	37,622,760
1947 Total	531,117	372,795	1,272,140	707,254	3,065,813	7,478,162	...	13,427,281

On May 1, the California Fish Canning Association issued a bulletin from Terminal Island, stating the domestic California production dropped 43.7% under 1951 for four months, while imports were up 56.3%.

Japan Limits Exports

Japan announced on May 1 it would hold its tuna producers to 12,000 tons raw, and 1,000,000 cases canned, effective to April 31, 1953. However, on Sept. 22 it increased the raw tonnage another 6,000 tons and shipped it well before the year closed.

Albacore fishing began in volume in July, with fishermen getting $350 per ton, and $400 later. The season was good, better than 20,000 tons being caught in waters from northern Mexico to Monterey. The imports to November 1 were approximately 10,000 tons.

Van Camp opened its huge San Diego cannery, having had it inactive since before the beginning of the year. There it processed local Albacore and fares from some tuna clippers. However, the firm continued to focus its main packing operations at Fish Harbor, Terminal Island.

In early June the big steel clipper *Sun Jason* delivered a fare of tuna to Gloucester, Mass., receiving a reported $300 per ton from east coast packers. The fare was 290 tons.

For the initial six months of operations, California plants had received 66,861 tons; packed 2,881,612 cases—as compared to 80,071 tons; 3,323,928 cases for the same period in 1951.

Half of the tuna preparation section in Star-Kist No. 4, the great new tuna cannery at Terminal Island, Calif., opened in 1952 by French Sardine Co. Belts are stainless steel, more than a mile of them in this room alone.

PAN-PACIFIC FISHERIES INC.

"Quality Packers"

TUNA
SARDINES
MACKEREL

TOP QUALITY FISH

PACKED UNDER THE MOST MODERN SANITARY CONDITIONS

350 SARDINE STREET, TERMINAL ISLAND, CALIFORNIA

1952 - IMPORTS OF FRESH AND FROZEN TUNA - 1952

Countries	Pounds												
	Nov. 1951	Dec. 1951	Jan. 1952	February	March	April	May	June	July	August	Sept.	October	Total
Japan	...	136,738	242,280	5,888,129	1,582,008	3,438,059	3,761,639	2,510,929	9,660,233	11,788,180	946,615	8,474,646	48,429,456
Peru	366,828	326,801	385,459	921,492	572,282	3,189,511	1,184,660	661,722	735,124	297,574	2,807,891	365,984	11,815,328
Costa Rica	...	...	...	...	...	...	26,918	...	206,065	370,459	...	...	603,442
Canal Zone	940,000	...	...	530,000	300,000	200,000	330,000	...	580,000	...	...	220,000	3,100,000
Ecuador	110,325	176,963	...	167,550	...	...	200,070	...	...	...	...	319,667	974,575
Canada	...	...	...	40,000	200,000	...	...	220,200	13,810	296,897	238,432	53,677	1,062,016
Mexico	...	...	...	...	...	...	...	...	...	6,584	16,485	...	23,069
Other Countries	...	...	...	...	101,122	249,089	...	240,000	...	...	240,060	...	830,271
Total	1,417,153	640,502	627,739	7,547,171	2,755,412	7,076,659	5,503,287	3,632,851	11,195,232	12,758,694	4,249,483	9,433,974	66,838,157

By October 1 the Southern California industry was catching up on 1951 and, by the end of the year, due to a late rush of deliveries for the holiday season—and with far more vessels at sea than last year, had topped it in tonnage. Some restrictions were in force for the fleets at the end of the year and many hook-and-liners were being forced to spend considerable time in port between sailings.

In September, at the annual meeting of the California Fish Canners Association, Max J. Gorby, head of the California Marine Curing & Packing Company, Terminal Island succeeded Montgomery Phister, Van Camp Sea Food Company, as president; James S. DeSilva, South Coast Fisheries, Inc., Terminal Island, was named vice president; G. P. Clark, renamed secretary—and Roy H. Beaton was re-elected executive vice president and general manager for the 10th time. Lee Irish, vice president Coast Fisheries Division, Quaker Oats Company, Wilmington, won the third annual golf tournament for the Miller Freeman perpetual trophy.

Additions and Losses In the Tuna Fleet

Five new tuna clippers were added to the Southern California fleet in 1952: Wood clippers, 150' *Constitution;* 138' *Ecuador;* 125' *Aggressor* and 120' *Helen S;* steel clipper, 127' *Sea-Preme.*

Losses were large during the year, both in clippers and seiners. The hook and line fleet lost 17; the seine fleet seven. Clippers lost:

Jan. 25, 68' *Ranger*, sank; Jan., 65' *Princess*, sank; Mar. 10, 68' *Senorita*, sank; Mar. 26, 70' *Sun Jewell*, exploded; Mar. 27, *Linda Jo*, 95' crashed; Mar. 30, 78' *Morning Star*, sank; April 11, *Lady Ann*, 87', sank; April 13, *Soa Joao*, 122', fire; April 28, *Verna Marie*, 65', fire; May 10, *Sea Wolf*, 90', fire. May 12, *North Star*, 110', crashed; June 3, *Emma R.S.* 95', sank; June 24, *Olympic*, 124', sank; July 7, *Steven L*, 86', crashed; Aug. 20, *Mary Ann*, sank; Oct. 14, *Senator*, 80', fire; Nov. 7, *Miss California*, 96', fire.

Purse seiners lost: Jan., *Esperia*, crashed; Jan. 30, *Golden Gate*, sank; May 1, *New Rex*, 78' sank; May 31, *Resolute*, 72', fire; Oct. 29, *Del Rio*, fire; Nov. 17, *Blue Sky*, 74', explosion; Nov. 17, *El Capitan*, collision.

Northern California Tuna Canning Grows

Tuna packing was quite active in northern California during 1952, at Eureka, San Francisco, and Monterey.

Tom Lazio Fish Co., Eureka, packed 1,100 cases of local caught Albacore, during the year, according to Angelo Intersimone, manager. There were 800 cases of solid pack, 200 cases of flakes, and 100 cases of light-dark, and some special orders packed in olive oil.

Most of this pack was sold in the company's own sea food restaurant to patrons under the "Shelter Cove" brand.

Westgate-Sun Harbor Co., Monterey, was busy during the year, packing both local caught Albacore and imported tuna.

Peninsula Packing Co., Monterey, which began packing tuna more than a year ago, packed California Albacore, and imported frozen Yellowfin and Skipjack under both the "Southern Seas" brand and buyers' labels. Peninsula has one of the most modern of northern California's tuna canning plants. G. H. Leutzinger is manager of the company in Monterey.

F. E. Booth Co., Inc., San Francisco, A. H. Mendonca, president, was active in tuna canning during 1952. This company packed Albacore for its own account and also packed imported Yellowfin and Skipjack.

During the year Jack Crivello's refrigerator ship *Puerto Del Sol* came in direct to the Booth dock with a cargo of frozen tuna.

Washington Fish & Oyster Co. of California, Inc., San Francisco, of which Al Levy is manager, packed more tuna than ever before during 1952, according to Mr. Levy.

During the year Washington Fish & Oyster Co. purchased the cannery at Pier 92 which it had been leasing for some time from Joe Balestrieri & Co. Mr. Levy said that the company was planning on expanding the plant and would put in modern refrigeration to both freeze and hold tuna.

Bell Smoked Fish Co., Fishermen's Wharf, San Francisco, Joe Tarantino, managing partner, packed about 5,000 cases of Albacore under the "Tara Bell" brand.

1952 - Southern California Tuna Pack By Ports

	Los Angeles Harbor Cases	San Diego Cases	TOTAL Cases
January	201,279	6,357	207,636
February	188,955	25,575	214,530
March	359,932	86,198	446,130
April	523,741	114,616	638,357
May	553,954	84,030	637,984
June	576,357	259,516	835,873
July	599,010	340,784	939,794
August	769,667	510,108	1,279,775
September	632,127	356,600	988,727
October	456,174	255,940	712,114
November	252,185	216,046	468,231
December	369,790	231,468	601,258
TOTALS	5,483,171	2,487,238	7,970,409

1952 - Imports of Canned Bonito - 1952

Countries	Pounds												
	Nov. 1951	Dec. 1951	Jan. 1952	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Peru	1,271,115	890,890	789,452	1,960,724	1,344,303	1,403,833	1,096,543	1,714,534	1,410,447	899,090	732,835	838,842	14,352,608
Chile	23,400	47,850	50,550	6,150	37,623	15,600	21	67,350	...	46,375	180,450	...	475,369
Other Countries	...	...	...	1,372	18,141	900	1,400	...	...	...	...	625	22,438
Total	1,294,515	938,740	840,002	1,968,246	1,400,067	1,420,333	1,097,964	1,781,884	1,410,447	945,465	913,285	839,467	14,840,415

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CALIFORNIA PACK OF CANNED TUNA AND RELATED FISHES

(Cases)

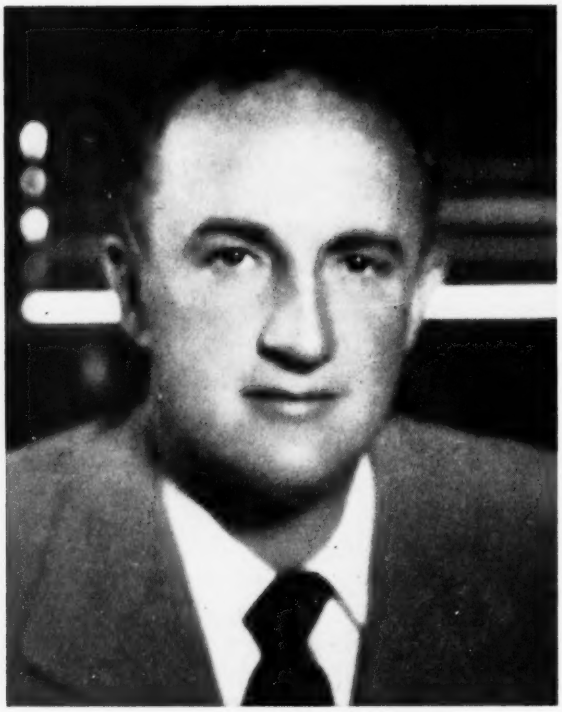
YEAR	SAN PEDRO DISTRICT								SAN DIEGO DISTRICT								San Francisco & Monterey	GRAND TOTAL	YEAR
	Yellowfin	Bluefin	Skipjack	Albacore	Flakes	Tonno	Tunalike (Bonito & Yellowtail)	TOTAL	Yellowfin	Bluefin	Skipjack	Albacore	Flakes	Tonno	Tunalike (Bonito & Yellowtail)	TOTAL			
1926	122,968	67,525	189,581	43,660	11,786	90,689	47,710	573,919	96,363	2,758	85,389	14,555	4,162	40,864	15,416	259,507	.....	833,426	1926
1927	185,423	40,363	155,755	105,598	7,816	197,275	26,660	718,890	200,635	9,645	226,420	20,481	435	10,221	20,147	487,984	.....	1,206,874	1927
1928	323,813	85,994	64,061	99,093	7,577	106,038	14,759	701,335	287,770	46,348	130,430	658	9,156	11,783	9,798	495,943	.....	1,197,278	1928
1929	199,292	67,091	128,436	130,212	7,707	88,454	49,943	671,135	458,687	22,637	218,696	2,426	10,906	31,351	13,027	757,730	.....	1,428,865	1929
1930	262,278	302,660	82,282	143,748	11,508	57,110	73,049	932,635	739,616	6,944	185,848	1,783	18,053	17,875	17,635	987,754	.....	1,920,389	1930
1931	182,115	46,462	166,091	144,796	12,850	35,514	37,289	625,117	431,229	.....	112,307	177	6,591	706	3,006	554,016	.....	1,179,133	1931
1932	275,263	8,510	101,626	52,215	11,517	42,247	34,348	525,726	403,050	177	203,381	.....	4,774	.....	10,881	622,263	13,162	1,161,151	1932
1933	258,982	7,580	74,728	49,391	10,907	41,200	19,281	462,069	678,810	1	198,313	.....	2,183	.....	50,797	930,104	.....	1,392,173	1933
1934	317,846	325,350	71,350	82,182	22,402	55,163	38,961	913,254	780,066	6,683	195,798	.....	8,100	.....	23,409	1,014,056	.....	1,927,310	1934
1935	306,202	413,630	88,746	107,501	33,909	81,660	108,203	1,139,851	948,276	24,871	249,747	4,648	7,749	545	101,039	1,336,875	.....	2,476,726	1935
1936	343,234	311,987	184,930	53,849	9,906	57,797	85,404	1,047,107	1,074,811	22,390	295,330	35	14,967	740	131,802	1,540,075	.....	2,587,182	1936
1937	416,611	188,432	276,165	83,123	34,534	136,612	88,870	1,224,347	1,165,866	27,103	487,751	8,036	15,904	1,125	88,182	1,793,967	.....	3,018,314	1937
1938	273,365	273,358	151,081	265,034	47,092	67,404	119,270	1,196,604	1,010,814	49,840	221,917	24,355	17,384	.....	77,818	1,402,128	.....	2,598,732	1938
1939	578,727	191,456	212,042	281,666	41,104	70,022	151,241	1,526,258	1,348,565	27,020	257,528	46,372	31,136	7,318	32,463	1,750,402	28,637	3,305,297	1939
1940	536,391	267,343	306,447	122,484	85,459	124,094	106,225	1,548,443	1,469,428	45,867	529,776	19,304	141,861	60,138	49,624	2,315,998	3,953	3,868,394	1940
1941	308,886	136,333	109,563	73,024	40,545	33,530	161,835	863,716	1,016,759	32,369	323,466	10,145	130,004	308	144,331	1,657,382	9,071	2,530,169	1941
1942	214,391	250,685	128,980	128,670	39,880	23,479	34,542	820,627	545,517	28,413	590,594	104,578	111,096	.....	35,138	1,415,336	6,257	2,242,220	1942
1943	303,881	162,844	88,203	187,052	120,548	17,239	96,595	976,362	392,114	12,021	294,964	227,347	381,967	.....	12,298	1,320,711	11,342	2,308,415	1943
1944	341,687	357,531	105,863	125,632	234,639	15,365	20,817	1,201,534	485,796	16,473	257,994	307,806	530,368	.....	7,521	1,605,958	1,685	2,809,177	1944
1945	460,982	275,116	89,279	148,286	452,292	16,198	34,628	1,476,781	1,037,009	22,742	458,895	329,251	96,162	.....	32,524	1,976,583	3,078	3,456,442	1945
1946	663,814	304,248	202,729	141,629	558,026	....	88,589	1,959,035	1,549,557	28,753	445,560	233,622	268,767	.....	63,762	2,590,021	6,341	4,555,397	1946
1947	765,426	342,309	209,281	104,726	417,644	7,403	308,540	2,155,329	1,875,087	6,557	695,170	145,300	323,511	26,359	68,927	3,140,911	61,258	5,357,498	1947
1948	969,732	94,190	200,693	290,811	477,769	22,663	270,404	2,326,608	2,364,819	1,991	729,505	462,255	366,828	.....	39,420	3,964,818	55,526	6,346,952	1948
1949	614,847	38,142	157,373	289,063	1,330,358	78,821	49,195	2,557,799	2,059,468	2,889	904,793	535,013	420,491	4,038	24,884	3,951,576	81,021	6,590,396	1949
1950	742,815	14,786	266,809	586,683	2,456,705	202,368	14,595	4,284,761	913,458	3,300	495,462	482,894	1,898,568	54,988	7,741	3,856,411	143,273	8,141,172	1950
1951	611,673	...	...	337,456	2,670,876	104,235	77,229	3,801,469	974,469	...	...	269,774	2,122,698	58,042	10,260	3,435,243	293,873	7,530,585	1951
1952	4,261,652	*	*	1,024,612	*	*	192,907	5,479,171	1,782,286	*	*	683,074	*	*	21,878	2,487,238	115,568	8,081,977	1952

*Segregation of lightmeat tuna pack as to species, and amounts of chunks, flakes and tonno not available at presstime. Accordingly, all lightmeat tuna and special packs made from lightmeat have been shown under Yellowfin. Albacore totals also include chunks, flakes and tonno packed from this species. Quantities given are in standard cases of 48 halves.

CALIFORNIA CANNED FISH PACKS

YEAR	Albacore Cases	Tuna-Bluefin Cases	Tuna-Skipjack Cases	Tuna-Yellowfin Cases	Tuna-Chunks, Flakes	Tuna-Tonno Cases	Bonito Cases	Yellowtail Cases	Mackerel Cases	Salmon Cases	Sardine Cases	Shad Cases	Squid Cases	Pet Food Cases	Misc. Cases	TOTAL CASES	YEAR
1926	66,001	70,283	274,970	165,561	8,162	131,553	44,186	18,940	550	11,761	2,163,755	....	23,536	....	63,794	3,043,052	1926
1927	126,699	50,008	382,175	366,395	7,631	207,496	22,277	24,530	10,961	8,435	2,625,412	6,485	....	....	44,396	3,882,900	1927
1928	99,751	132,342	194,491	503,077	16,733	117,821	18,900	5,657	388,471	4,585	2,815,330	7,475	2,056	....	124,809	4,431,498	1928
1929	132,638	89,728	347,132	612,810	18,613	119,805	47,674	15,296	611,503	5,503	3,941,459	9,791	6,056	....	53,925	6,012,433	1929
1930	145,531	309,604	268,130	878,382	29,561	74,985	69,341	21,343	127,333	11,202	3,069,524	1,796	25,271	....	127,236	5,159,239	1930
1931	144,973	46,462	278,398	613,344	15,441	36,220	38,254	2,041	101,217	14,070	1,794,991	....	19,827	44,372	4,855	3,158,465	1931
1932	65,377	8,687	305,007	678,313	16,291	42,247	42,114	3,115	89,176	2,005	1,001,845	201	....	67,256	50	2,323,052	1932
1933	49,391	7,581	273,041	937,792	13,090	41,200	36,560	33,518	760,126	3,076	1,422,860	....	1,740	112,725	1,369	3,698,293	1933
1934	82,182	332,411	267,328	1,097,912	30,502	55,163	52,554	9,816	1,214,491	820	2,051,726	....	4,257	80,224	1,104	5,324,084	1934
1935	112,149	438,501	338,493	1,254,478	41,658	82,205	128,065	81,177	1,761,186	874	2,529,262	5,039	8,781	122,826	2,269	6,920,625	1935
1936	53,884	334,377	480,260	1,418,045	24,873	58,537	104,078	112,128	1,228,348	....	2,820,742	13,124	12,282	128,384	5,178	6,803,815	1936
1937	91,159	215,535	763,916	1,582,477	50,438	137,737	129,572	47,480	793,780	147	2,983,204	6,361	5,531	179,230	100	6,986,616	1937
1938	289,389	324,198	372,998	1,284,179	64,476	67,404	125,854	71,234	958,890	....	2,443,469	11,244	20,167	287,403	545	6,341,557	1938
1939	356,675	218,476	469,570	1,927,292	72,240	77,340	159,090	24,614	968,718	....	3,326,162	12,665	23,926	384,427	150	8,021,345	1939
1940	145,741	313,210	836,223	2,005,819	227,320	184,232	87,367	68,482	1,435,113	....	3,188,089	15,743	34,603	832,091	100	9,374,133	1940
1941	92,240	168,702	433,029	1,325,645	170,549	33,838	176,859	129,307	843,747	1,125	5,395,284	68	21,587	1,027,903	16	9,820,465	1941
1942	239,505	279,098	719,574	759,908	150,976	23,479	32,288	37,392	614,090	....	3,846,785	24,945	941	197,403	....	6,941,643	1942
1943	425,741	174,865	383,167	696,209	502,515	26,599	35,625	73,268	839,312	1,475	3,400,106	11,516	119,237	....	11,131	6,699,736	1943
1944	435,123	374,004	363,857	827,483	757,800	15,365	8,490	19,848	986,422	1,691	3,725,657	12,541	141,808	....	45,206	7,738,949	1944
1945	480,615	297,858	548,174	1,497,991	548,454	16,198	49,816	17,336	589,617	5,457	3,884,582	....	184,141	....	225,971	8,346,210	1945
1946	381,271	333,001	648,289	2,213,692	826,793	....	108,306	44,045	716,668	9,817	3,102,232	589	643,843	....	56,689	9,085,235	1946
1947	286,272	370,893	904,451	2,642,354	742,038	33,762	243,994	133,734	1,522,199	18,754	1,814,050	1,778	229,967	1,087,040	199,115	10,230,401	1947
1948	797,035	98,473	930,235	3,335,759	850,760	22,663	158,253	153,428	971,646	22,786	3,203,028	2,477	369,762	1,153,802	204,741	12,274,848	1948
1949	861,737	46,336	1,068,215	2,694,947	1,762,223	82,859	20,312	53,767	924,104	1,801	4,286,034	893	88,217	1,249,366	20,265	13,161,076	1949
1950	1,125,453	11,186	734,528	1,632,625	4,497,839	257,356	8,263	14,073	1,410,541	4,279	5,430,439	1,948	84,675	2,060,709	85,827	17,359,751	1950
1951	607,230	....	....	1,586,142	4,793,574	162,277	14,356	87,489	1,040,300	1,266	3,052,642	1,078	224,884	1,593,176	431,465	13,595,879	1951

MALCOLM MACNAUGHTON
Honolulu
President, Hawaiian Tuna Packers, Ltd.



JOSEPH J. BOGDANOVICH
Terminal Island
President, French Sardine Co.

SEBASTIAN SOLLECITO
Monterey
President, Enterprise Packers

CAPT. SAM CRIVELLO
San Diego
President, American Tunaboat Association

SAN PEDRO CANNED TUNA

(Cases)

YEAR	Yellowfin	Bluefin	Skipjack	Albacore	Tonno	Tuna Flakes	Yellowtail	Bonito	TOTAL
1926	122,968	67,525	189,581	43,660	90,689	11,786	8,374	39,336	573,919
1927	185,423	40,363	155,755	105,598	197,275	7,816	8,827	17,833	718,890
1928	323,813	85,994	64,061	99,093	106,038	7,577	902	13,857	701,335
1929	199,292	67,091	128,436	130,212	88,454	7,707	5,845	44,098	671,135
1930	262,278	302,660	82,282	143,748	57,110	11,508	16,505	56,544	932,635
1931	182,115	46,462	166,091	144,796	35,514	12,850	1,292	35,997	625,117
1932	275,263	8,510	101,626	52,215	42,247	11,517	2,447	31,901	525,726
1933	258,982	7,580	74,728	49,391	41,200	10,907	1,389	17,892	462,069
1934	317,846	325,350	71,350	82,182	55,163	22,402	3,716	35,245	913,254
1935	306,202	413,630	88,746	107,501	81,660	33,909	17,123	91,080	1,139,851
1936	343,234	311,987	184,930	53,849	57,797	9,906	17,069	68,335	1,047,107
1937	416,611	188,432	276,165	83,123	136,612	34,534	3,352	85,518	1,224,347
1938	273,365	273,358	151,081	265,034	67,404	47,092	27,440	91,830	1,196,604
1939	578,727	191,456	212,042	281,666	70,022	41,104	11,739	139,502	1,526,258
1940	536,391	267,343	306,447	122,484	124,094	85,459	40,861	65,364	1,548,443
1941	308,886	136,333	109,563	73,024	33,530	40,545	26,241	135,594	863,716
1942	214,391	250,685	128,980	128,670	23,479	39,880	16,427	18,115	820,627
1943	303,881	162,844	88,203	187,052	17,239	120,548	67,780	28,815	976,362
1944	341,687	357,531	105,863	125,632	15,365	234,639	16,611	4,206	1,201,534
1945	460,982	275,116	89,279	148,286	16,198	452,292	3,262	31,366	1,476,781
1946	663,814	304,248	202,729	141,629	....	558,026	15,080	73,509	1,959,035
1947	765,426	342,309	209,281	104,726	7,403	417,644	87,934	220,606	2,155,329
1948	969,732	94,190	200,693	290,811	23,009	477,769	120,257	150,147	2,326,608
1949	614,847	38,142	157,373	289,063	78,821	1,330,358	31,072	18,123	2,557,799
1950	742,815	14,786	266,809	586,683	202,368	2,456,705	10,838	3,757	4,284,761

YEAR & TYPE	Solid	Standard	Chunks	Grated & Flakes	Dark & Light	Tonno	Misc.	TOTAL
1951								
Lightmeat	497,942	113,731	666,590	1,701,833	48,690	103,817	11,260	3,143,863
Whitemeat	264,789	72,667	99,723	141,941	610	418	229	580,377
Yellowtail & Bonito	.....	22,926	.....	66,153	.....	.....	.....	89,079
TOTAL	762,731	209,324	766,313	1,909,927	49,300	104,235	11,489	3,813,319

Tuna Imports Launch Battles for Tariffs

The acute situation arising late in 1950 and through 1951 as result of the staggering volume of imported tuna entering the United States led the several elements of the tuna industry to undertake counter measures designed to protect the domestic industry.

Actions followed two general lines:

1. Effort to secure a temporary duty of 3c per lb. on imports of frozen tuna. This measure was sponsored primarily by the tuna vessel owners and fishermen.

2. Attempt to secure action through the Tariff Commission to equalize the duty on tuna canned in brine with that on tuna canned in oil. This effort was launched by the California tuna canners.

Late in January and running into February of 1952, two hearings of vital importance were held in Washington. The Senate Finance Committee hearing was concerned with the bill to put a duty on frozen tuna—a measure which had already passed the lower house of Congress.

The Tariff Commission hearing was concerned with the petition for equalizing duty on tuna in brine with that on tuna in oil.

Both phases of the problem were examined exhaustively, and both sides, producers and importers, presented extensive testimony.

SAN DIEGO CANNED TUNA

(Cases — All Sizes)

Year	Yellowfin	Bluefin	Skipjack	Albacore	Tonno	Tuna Flakes	Yellowtail	Bonito	TOTAL
1926	96,363	2,758	85,389	14,555	40,864	4,162	10,566	4,850	259,507
1927	200,635	9,645	226,420	20,481	10,221	435	15,703	4,444	487,984
1928	287,770	46,348	130,430	658	11,783	9,156	4,755	5,043	495,943
1929	458,687	22,637	218,696	2,426	31,351	10,906	9,451	3,576	757,730
1930	739,616	6,944	185,848	1,783	17,875	18,053	4,838	12,797	987,754
1931	431,229	....	112,307	177	706	6,591	749	2,257	554,016
1932	403,050	177	203,381	....	....	4,774	668	10,213	622,263
1933	678,810	1	198,313	....	....	2,183	32,129	18,668	930,104
1934	780,066	6,683	195,798	....	....	8,100	6,100	17,309	1,014,056
1935	948,276	24,871	249,747	4,648	545	7,749	64,054	36,985	1,336,875
1936	1,074,811	22,390	295,330	35	740	14,967	95,059	36,743	1,540,075
1937	1,165,866	27,103	487,751	8,036	1,125	15,904	44,128	44,054	1,793,967
1938	1,010,814	49,840	221,917	24,355	....	17,384	43,794	34,024	1,402,128
1939	1,348,565	27,020	257,528	46,372	7,318	31,136	12,875	19,588	1,750,402
1940	1,469,428	45,867	529,776	19,304	60,138	141,861	27,621	22,003	2,315,998
1941	1,016,759	32,369	323,466	10,145	308	130,004	103,066	41,265	1,657,382
1942	545,517	28,413	590,594	104,578	....	111,096	20,965	14,173	1,415,336
1943	392,114	12,021	294,964	227,347	....	381,967	5,488	6,810	1,320,711
1944	485,796	16,473	257,994	307,806	....	530,368	3,237	4,284	1,605,958
1945	1,037,009	22,742	458,895	329,251	....	96,162	14,074	18,450	1,976,583
1946	1,549,557	28,753	445,560	233,622	....	268,767	28,965	34,797	2,590,021
1947	1,875,087	6,557	695,170	145,300	26,359	323,511	45,800	23,127	3,140,911
1948	2,364,819	1,991	729,505	462,255	....	366,828	31,362	8,058	3,964,818
1949	2,059,468	2,889	904,793	535,013	4,038	420,491	22,695	2,189	3,951,576
1950	913,458	3,300	495,462	482,894	54,988	1,898,568	3,235	4,506	3,856,411

YEAR & TYPE	Solid	Standard	Chunks	Grated & Flakes	Dark & Light	Tonno	Misc.	TOTAL
1951								
Lightmeat	872,560	101,909	1,444,755	530,229	2,678	58,042	4,991	3,015,164
Whitemeat	180,887	88,887	100,926	39,119	.....	.....	.....	409,819
Yellowtail & Bonito	.....	270	.....	12,175	.....	.....	.....	12,445
TOTAL	1,053,447	191,066	1,545,681	581,523	2,678	58,042	4,991	3,437,428

Eventually the Finance Committee recommended that the bill "do pass" —but in the closing hours of the Senate session in June the measure was defeated by a vote largely along party lines, with the Democratic majority voting against the bill. Republican senators casting negative votes largely represented Atlantic seaboard states which have growing tuna canning industries based upon imported frozen tuna.

Immediately following this defeat, the Senate Finance Committee requested the Tariff Commission to make a comprehensive investigation of tuna imports and their effect upon the domestic industry.

Pacific Coast senators also filed a request with the Fish and Wildlife Service, asking it to make a somewhat similar study.

Equalized Canned Tuna Tariffs Are Rejected

In November, 1952, the Tariff Commission held a second tuna tariff hearing, this one being concerned primarily with the question of frozen tuna, which enters the United States duty-free. (It should be noted that the earlier hearing by the commission was devoted to the other phase of the problem — the duty on tuna canned in brine.)

Again both sides presented comprehensive arguments and data, their presentations showing the benefit of increased experience and additional research.

Scarcely had the Tariff Commission closed its quasi-judicial hearing on the matter of a tariff on frozen tuna when it issued its decision on the matter of equalizing the duty on tuna canned in brine with that of tuna canned in oil.

Once more the proposal was rejected, and once more by a partisan division. The Democratic members of the commission uttered the majority opinion to the effect that imports of tuna canned in oil were not injurious to the domestic tuna industry.

This decision was based on the sophistry that tuna canned in brine does not compete with tuna canned in oil; and that, as the United States industry does not can tuna in brine, the imports of the brined product do not compete injuriously with any American product.

Republican members of the commission disagreed diametrically with this finding of fact and reasoning.

Renewed Tariff Battles Are Forecast for 1953

With both the Tariff Commission and the Fish and Wildlife Service due to report to the Senate on their researches into the matter of tuna imports and tariffs on tuna by March 1, there was every expectation that the controversy would surge around these subjects in Congress again through 1953.

Imports of Japanese tuna, plus substantial quantities from other countries, continued in volume through 1952.

The year was not far advanced before the Japanese exporters had filled the full quota of frozen tuna which the government of Japan had set for the twelvemonth. Accordingly, midway in 1952 that government informed the United States Department of State that it was considering increasing the quota of frozen tuna by 6,000 tons. The State Department replied that it was not in any wise concerned; that the quota was Japan's idea in the first place; and that it was the policy of the Department of State to oppose all trade-restrictive quotas.

The extended quota was filled in the matter of a few weeks.

Following the rise of tuna tariff agitation in the United States, the Japanese government established a "check price" which seeks to prevent export sales of tuna priced materially below the American market for domestic fish. Importers also were asked to certify to the necessity for the tuna covered by their orders.

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TUNA
NORTHWEST

Pacific Northwest Albacore canning in 1952 produced the third largest pack in the history of the business, despite the fact that fishing off Oregon and Washington was the poorest in years.

The apparent paradox can be explained on the basis of imports of frozen Albacore, which provided important supplement for the local production during 1952.

In addition to the Pacific Northwest Albacore production, that region also packed a moderate volume of Lightmeat tuna received frozen from both domestic and foreign sources.

ONLY in 1944 and 1950 did the Pacific Northwest pack more Albacore than in 1952, a condition resulting from imports of frozen Whitemeat tuna, principally from Japan.

This is evident on the face of the figures, because the 1952 fishing season was one of the poorest the Pacific Northwest industry has known since the business assumed commercial stature.

In addition to its Albacore pack of 588,000 cases, the Pacific Northwest canned a substantial quantity of Lightmeat tuna, all received frozen. Part of it came from Central American deliveries by American tuna ves-

1952-PACIFIC NORTHWEST ALBACORE PACK-1952

COMPANY	CANNERY LOCATION	FANCY & STANDARD		CHUNKS & FLAKES		TOTAL
		½-lb. Flats, 48's	Other Sizes	White Meat ½-lb.	Blended, White & Dark, ½-lb., 48's.	Standard Cases, 4-doz. ½-lb. Cans
Barbey Packing Corporation	Astoria	5,474	...	591	818	6,883
Columbia River Packers Association	Astoria	213,929	21,213	34,431	71,987	341,560
Ilwaco Fish Co.	Ilwaco	7,396	...	1,960	3,147	12,503
Paragon Packing Co.	Hoquiam	5,286	...	1,262	744	7,292
Point Adams Packing Co.	Hammond	26,384	3,603	7,674*	6,924	44,585
Strand Fisheries	Hoquiam - Aberdeen	973	...	230	239	1,442
Union Fishermen's Co-Op Packing Co.	Astoria	8,548	...	988	2,667	12,203
Van Camp Seafood Co.	Astoria	44,055	664	37,613	...	82,332
West Coast Fish Co.	Aberdeen	15,702	...	1,661	5,343	22,706
Whiz Fish Products Co.	Hoquiam	38,015	...	3,837	15,568	57,420
TOTAL		365,762	25,480	90,247	107,437	588,926

* Includes 716 cases 1-lb. flats, counted two for one.

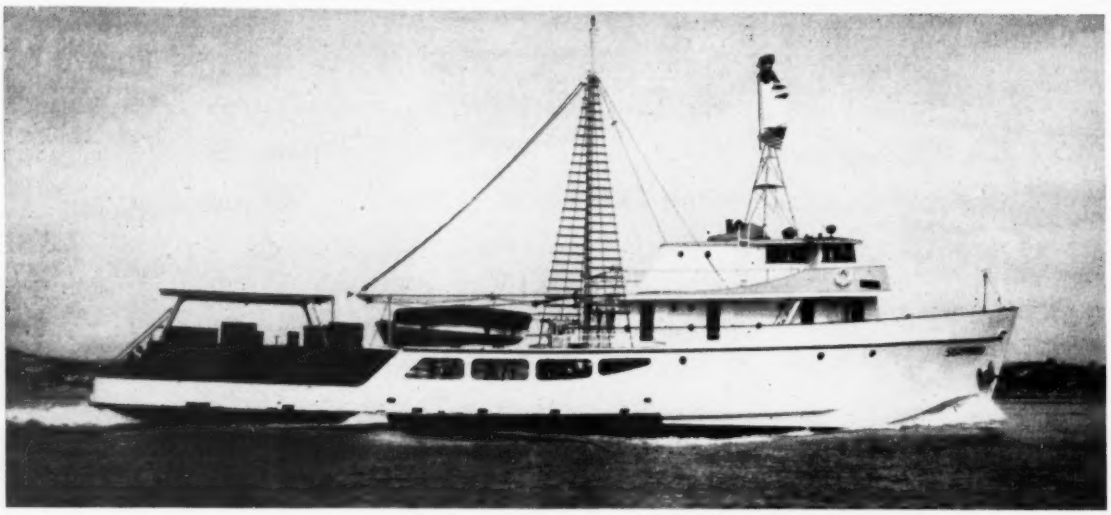
NORTH COAST ALBACORE PACKS BY PORTS

(Cases)

Oregon Coast	Columbia River	Oregon Total	Year	Pacific Northwest Regional Total	Year	Washington Total	Willapa-Columbia River	Grays Harbor	Puget Sound
...	487,563	487,563	1952	588,926	1952	101,363	12,503	88,860	...
...	334,903	334,903	1951	398,236	1951	54,333	...	54,333	...
13,060	586,287	599,347	1950	701,014	1950	101,667	3,500	98,167	...
23,287	319,337	342,624	1949	432,919	1949	90,295	10,845	79,450	...
44,822	286,847	331,669	1948	417,354	1948	85,685	8,225	76,627	833
(a)47,123	281,062	(a)328,185	1947	(a)385,570	1947	57,385	8,434	48,508	443
23,243	121,386	144,629	1946	192,237	1946	47,608	...	47,608	...
55,747	348,958	404,705	1945	466,859	1945	62,154	...	62,154	...
40,000	(b)750,356	790,356	1944	846,596	1944	56,240	...	56,240	...
8,000	282,536	290,536	1943	301,414	1943	10,878	...	10,878	...
...	307,810	307,810	1942	314,353	1942	6,543	...	6,543	...
...	194,833	194,833	1941	197,629	1941	2,796	...	1,176	1,620
...	197,535	197,535	1940	207,723	1940	10,188	...	4,908	5,280
2,118	151,584	153,702	1939	(c)173,359	1939	15,857	...	3,100	12,757

(a) Includes 4,216 cases canned at Eureka, Calif. (b) Division of 1944 pack between Columbia River and Oregon Coast is only approximate. (c) Includes 3,800 cases canned in British Columbia.

Note:-Data for the several calendar years cover packs made from fish caught during those years, even though in some cases canning of frozen stocks may not have been completed until in the next calendar year.



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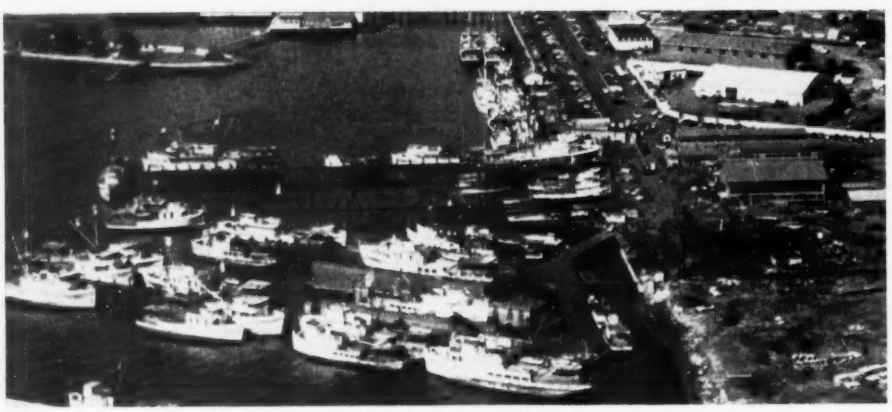

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NORTH COAST ALBACORE BY GRADES

(Cases)

OREGON					PACIFIC Northwest Combined Totals		WASHINGTON			
Fancy & Standard	Flakes		Total Standard	Year		Year	Total Standard	Flakes		Fancy & Standard
	White	Blended						White	Blended	
323,870	81,297	82,396	487,563	1952	588,926	1952	101,363	25,041	8,950	67,372
254,173	23,984	56,746	334,903	1951	389,236	1951	54,333	12,347	3,186	38,800
430,712	62,849	101,319	594,880	1950	701,014	1950	106,134	18,791	15,277	72,066
265,266	24,336	52,697	342,299	1949	432,919	1949	90,620	23,244	5,731	61,645
231,138	48,583	50,404	330,125	1948	417,354	1948	87,229	15,450	9,372	62,409
231,075	50,163	45,464	(a)326,702	1947	(a)385,570	1947	58,868	5,876	11,179	41,813
101,478	23,477	19,674	144,629	1946	192,237	1946	47,608	7,251	5,708	34,649
274,720	69,454	55,674	(d)399,848	1945	466,859	1945	67,011	7,391	9,440	50,180
564,574	106,777	119,005	790,356	1944	(b)846,596	1944	56,240	...	16,240	40,000
250,982	39,554	...	290,536	1943	301,414	1943	10,878	...	1,775	9,103
...	...	...	307,810	1942	314,353	1942	6,543	...	...	...
...	...	...	194,751	1941	197,629	1941	2,878	...	...	...
...	...	...	197,735	1940	207,723	1940	10,188	...	...	...
...	...	...	153,702	1939	(c)173,359	1939	15,857	...	...	...

(a) Includes 3,231 cases fancy and 985 cases flakes canned at Eureka, Calif.
(b) Division of 1944 pack as to grades is approximate only.
(d) Includes a small quantity canned at Ilwaco, Wash.
(c) Includes 3,800 cases canned in British Columbia.

Note:-Grade segregation not available for years prior to 1943. Figures for the several calendar years cover quantities packed from fish caught during those years, even though in some cases canning of frozen stocks may not have been completed until the next calendar year.

1952—WASHINGTON ALBACORE LANDINGS—1952

PORT	JULY		AUGUST		SEPTEMBER		OCTOBER		SEASON		PORT
	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	TRIPS	POUNDS	
Grays Harbor	2	515	3	1,997	7	31,840	2	7,434	14	41,786	Grays Harbor
Willapa Harbor	...	...	...	...	2	6,961	...	...	2	6,961	Willapa Harbor
Puget Sound	...	...	...	...	3	8,235	12	33,743	15	41,978	Puget Sound
TOTAL	2	515	3	1,997	12	47,036	14	41,177	31	90,725	TOTAL

NOTE. - Figures are full and complete. No British Columbia or California imports are included

sels, and part in the form of frozen imports from foreign fishing operations.

Albacore canning operations in the Pacific Northwest in 1952 depended almost wholly upon imported frozen fish—direct deliveries of American-caught Albacore having dwindled to nominal volume.

The candid reporter can come to no other conclusions.

Not since its beginning years in the mid-'30s has the Pacific Northwest fishery found tuna so scarce.

What landings there were came in large degree from the waters off northern California, the fish being delivered to Oregon—and in some cases to Washington — ports because the men wanted to run home; or because market prices in the more northerly ports seemed more attractive.

1952 Oregon-Washington Tuna Fishery Nominal

Certainly the fishing of 1952 off the coast of Washington was virtually blank; and off-Oregon waters yielded little.

The mysterious influences which bring the Albacore in one year and repel them the next were in full negative effect in 1952.

The first Albacore reported in Pacific Northwest waters was taken June 24 by the federal exploratory

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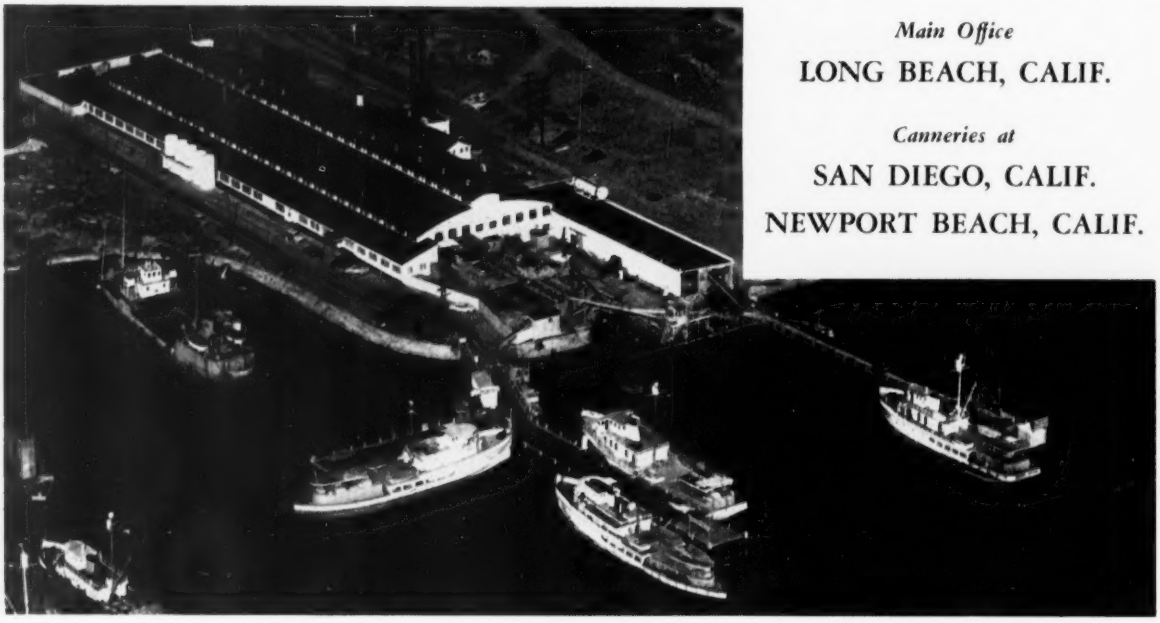
vessel *John N. Cobb,* scouting 500 miles off-shore from Eureka. However, this early catch was not followed by fishing in any volume. The first Albacore to be delivered commercially at Astoria arrived July 29.

The entire season remained most disappointing. The fleet had been fooled before in recent years and as a result comparatively few boats outfitted for tuna, preferring to stay with their salmon fishing until and unless the Albacore really hit—which they never did.

True, a good many of the larger craft — halibut longliners mostly — outfitted for tuna and soon worked south, where they found them out of San Francisco, Moss Landing, Terminal Island and San Diego.

Toward the end of the season Pacific Northwest Albacore price, which had opened the season at $350, advanced to $425.

WEST COAST PACKING CORP.



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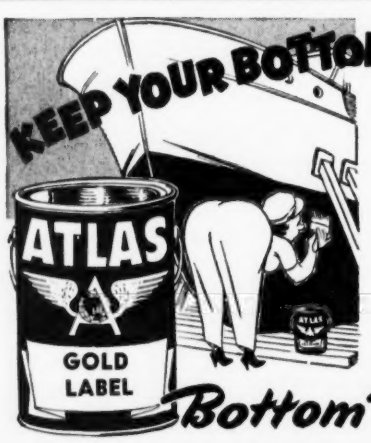

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NORTH PACIFIC ALBACORE TUNA LANDINGS

(Pounds) OREGON			YEAR	(Pounds) WASHINGTON					(Pounds) Combined Oregon and Washington Totals
Columbia River	South of Columbia	Oregon TOTAL		Puget Sound	Grays Harbor	Willapa Harbor	Columbia River	Washington State, TOTAL	
		2,040,981	1942 July	. . . .	177,522	900	175,975	354,397	2,395,378
		4,799,557	August	30,131	777,508	7,576	309,717	1,124,932	5,924,489
. . . .	. . . .	3,701,392	September	11,162	282,703	74,406	55,346	423,617	4,125,009
. . . .	. . . .	401,026	October	9,365	46,619	206	15,922	72,112	473,138
. . . .	. . . .	10,942,956	1942 TOTALS	50,658	1,284,352	83,088	556,960	1,975,058	12,918,014
1,333,241	419,371	1,752,612	1943 July	. . . .	300,247	. . . .	185,711	485,958	2,238,570
2,922,206	1,160,977	4,083,183	August	22,920	1,393,057	. . . .	338,333	1,754,310	5,837,493
2,646,887	689,252	3,336,139	September	169,788	1,566,949	. . . .	132,534	1,869,271	5,205,410
1,067,015	147,007	1,214,022	October	284,112	250,411	. . . .	4,616	539,139	1,753,161
7,969,349	2,416,607	10,385,956	1943 TOTALS	476,820	3,510,664	. . . .	661,194	4,648,678	15,034,634
975,332	612,585	1,587,917	1944 July	34,686	741,058	3,347	247,912	1,027,003	2,614,920
6,288,455	2,690,529	8,978,984	August	141,553	4,683,789	68,714	660,234	5,554,290	14,533,274
7,708,799	1,069,649	8,778,448	September	279,354	3,536,677	161,052	125,037	4,102,120	12,880,568
3,014,988	58,367	3,073,355	October	206,906	786,177	. . . .	14,355	1,007,436	4,080,793
17,987,574	4,431,130	22,418,704	1944 TOTALS	662,499	9,747,701	233,113	1,047,538	11,690,851	34,109,555
. . . .	. . . .	. . . .	1945 June	. . . .	42	. . .	6,730	6,772	6,772
1,147,222	306,909	1,454,131	July	119,847	1,850,105	21,572	196,118	2,187,642	3,641,773
6,290,075	1,612,425	7,902,500	August	92,797	3,009,811	75,900	335,131	3,513,639	11,416,139
2,327,060	262,702	2,589,762	September	28,130	140,779	28,609	9,608	207,126	2,796,888
231,978	. . . .	231,978	October	104,491	45,882	517	. . . .	150,890	382,868
. . . .	. . . .	. . . .	November	842	44	. . . .	. . . .	886	886
9,996,335	2,182,036	12,178,371	1945 TOTALS	346,107	5,046,663	126,598	547,587	6,066,955	18,245,326
323,331	70,559	393,899	1946 July	172	289,029	23,505	46,995	359,701	753,591
1,741,573	629,466	2,371,039	August	24,675	778,484	33,936	148,526	985,621	3,356,660
1,155,319	30,556	1,185,875	September	165,491	624,818	. . . .	1,743	792,052	1,977,927
3,220,223	730,581	3,950,804	1946 TOTALS	190,338	1,692,331	57,441	197,264	2,137,374	6,088,178
673,647	362,169	1,035,816	1947 July	45,505	1,037,929	43,786	140,469	1,267,689	2,303,505
2,027,945	584,636	2,612,581	August	177,831	2,153,029	92,529	260,545	2,683,934	5,296,515
2,092,618	2,304,774	4,397,392	September	8,563	65,899	10,785	. . . .	85,247	4,482,639
817,813	310,021	1,127,834	October	25,480	32,898	. . . .	. . . .	58,378	1,186,212
5,612,023	3,561,600	9,173,623	1947 TOTALS	257,379	3,289,755	147,100	401,014	4,095,248	13,268,871
1,990,811	652,747	2,643,558	1948 July	62,312	1,578,549	58,561	162,821	1,862,243	4,505,801
2,723,713	962,938	3,686,651	August	390,672	3,318,286	123,892	348,561	4,181,411	7,868,062
932,365	422,249	1,354,614	September	169,900	116,808	61,822	. . . .	348,530	1,703,144
33,053	124,329	157,382	October	14,938	36,521	6,890	. . . .	58,349	215,731
5,679,942	2,162,263	7,842,205	1948 TOTALS	637,822	5,050,164	251,165	511,382	6,450,533	14,292,738
526,928	104,676	631,604	1949 July	31,968	654,685	32,382	51,073	770,108	1,401,712
1,625,236	519,676	2,144,912	August	825,487	2,174,227	79,840	93,094	3,172,648	5,317,560
1,301,185	923,260	2,224,445	September	6,860	287,086	. . . .	2,507	296,453	2,520,998
1,073,558	224,787	1,298,345	October	75,601	115,196	. . . .	. . . .	190,797	1,489,642
26,273	1,361	27,634	November	3,895	. . . .	. . . .	. . . .	3,895	31,529
4,553,180	1,773,760	6,326,940	1949 TOTALS	943,811	3,231,194	112,222	146,674	4,433,901	10,760,841
1,430,466	233,420	1,663,886	1950 July	152,213	1,506,955	130,851	365,227	2,155,246	3,819,132
1,114,353	787,569	1,901,922	August	317,068	1,563,558	78,253	108,101	2,066,980	3,967,902
254,458	241,514	495,972	September	34,672	7,293	. . . .	. . . .	41,965	537,937
1,046,105	171,781	1,217,886	October	. . . .	22,084	. . . .	. . . .	22,084	1,239,970
210,851	. . . .	210,851	November	. . . .	. . . .	. . . .	. . . .	. . . .	210,851
4,056,233	1,434,284	5,490,517	1950 TOTALS	503,953	3,099,890	209,104	473,328	4,286,275	9,776,792
25,527	15,656	41,183	1951 July	. . . .	52,442	1,520	. . .	53,962	95,145
186,450	30,336	216,786	August	20,528	88,817	18,121	1,098	128,564	345,350
667,145	635,503	1,302,648	September	21,106	171,236	34,712	. . . .	227,054	1,529,702
1,012,583	241,741	1,254,324	October	92,355	19,554	. . . .	. . . .	111,909	1,366,233
90,878	10,726	101,604	November	. . . .	. . . .	. . . .	. . . .	. . . .	101,604
1,982,583	933,962	2,916,545	1951 TOTALS	133,989	333,049	54,353	1,098	521,489	3,438,034
			1952						
. . . .*	. . . .*	13,994	July	. . .	515	. . .	. . . .	515	14,509
. . . .*	. . . .*	123,099	August	. . .	1,997	. . .	. . . .	1,997	125,096
. . . .*	. . . .*	1,331,383	September	8,235	31,840	6,961	. . . .	47,036	1,378,419
. . . .*	. . . .*	851,716	October	33,743	7,434	. . .	. . . .	41,177	892,893
. . . .*	. . . .*	2,320,192	1952 TOTALS	41,978	41,786	6,961	. . . .	90,725	2,410,917

* Data not available.

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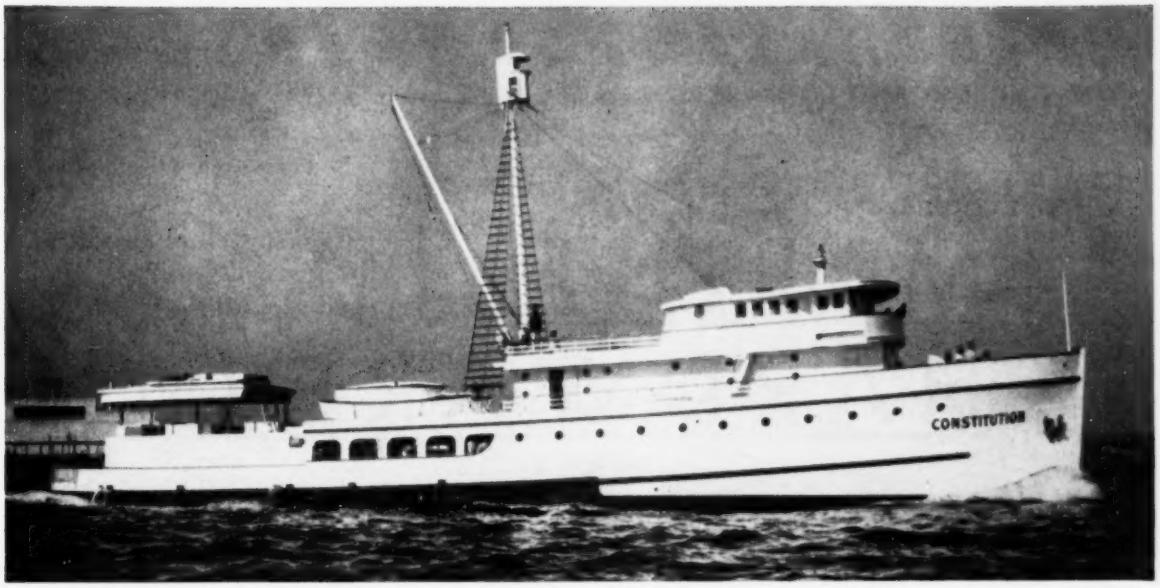

"Constitution," 150' in length, was the largest of the new tuna clippers built in 1952, and stands as an example of the fleet of magnificent fishing vessels which produced the great majority of America's ever-growing pack of canned tuna.

California Clippers of '52

SOUTHERN California shipyards added five new tuna clippers to the fleet in 1952. These were the *Ecuador*, *Sea-Preme*, *Constitution*, *Helen S* and *Aggressor*.

Largest of these, and one of the outstanding tuna hook-and-liners ever built, was the 150' by 29'8" *Constitution*, designed by Ed G. Bertin and Manuel Madruga, and built as the yard's 77th tuna clipper by Campbell Machine Company.

The owners are Joe S. Rogers and associates; the skipper and co-owner, Manuel Neves, Jr. Cost of the huge 410-ton capacity vessel was in excess of $500,000.

Propulsion is by a Model Z6 Union super-charged diesel, 6 cyl. 16 by 20½, 1000-hp. direct-reversing, driving a three-bladed Coolidge propeller through 7⅞" Monel tail shaft held by Goodrich Cutless rubber bearings.

Auxiliaries are a pair of 200-hp. 6 cyl. Unions direct-connected to 125-kw. d.c. generators. Refrigeration is provided by four 6½ by 6½ compressors, driven by 30-hp. motors. Fish cargo is held by a three-phase system in 15 compartments.

Ecuador was another notable wood clipper, this designed by Omar Schmidt and built by National Steel & Shipbuilding Corporation, San Diego. She was a sister-clipper to the *Equator* commissioned in 1951—and both are 138'3" long, with 30' beam. Owner is M. O. Medina, and one of his partners, Eugene Cabral, is skipper.

Propulsion is by an 850-hp. 8 cyl. super-charged Enterprise diesel, with 2:1 reduction gears. Auxiliaries are a pair of Model 21 Murphy diesels driving 105-kw. generators. A standby, located in the upper engineroom is a General Motors, Series 6-71, direct connected to 65-kw. generator.

The pay cargo of 360 tons is held by a Kohlenberger refrigeration system, employing four 6 by 6 Kohenberger compressors, and in which the tuna are eventually held in the many wells and tanks in dry condition. Among the navigational aids is Sperry automatic steering.

Aggressor was turned out by the Martinolich Shipbuilding Corporation, San Diego, designed by Anthony Martinolich for Joseph C. Rogers & Associates. She was also of wood construction, 125' by 28'6". She carries a crew of 16 and can pack a 260-ton fish cargo at zero temperatures or lower.

Main engine is a Model DMG Enterprise, 8 cyl. super-charged to 800-hp. The tail shaft is 6 5.8" Monel; Goodrich Cutless bearings are 9 ⅝" O.D. Auxiliaries are two General Motors, Model 3-268-A, 3 cyl. connected to 100-kw. generators and a standby G.M. 6-71 to 75-kw. dynamo.

Refrigeration chosen for this clipper was a Baker system, installed under the supervision of Ben Duncan, field engineer for Baker Engineering Corporation, Los Angeles. Compressors are three Baker 6¼ by 6¼, Model 9-A driven by 30-hp. motors. For galley and ship's stores there is another Baker, 2⅞" by 2¼", 2 cyl.

Among electronic assistance aboard is a Sperry Magnetic Compass Pilot; a 1,000-fathom, "Fathometer," supplied by Submarine Signal Co.; and a 500-watt Pacific Electronics radiotelephone.

Helen S, a wood clipper, was built for Manuel E. Simas and associates by Harbor Boat & Yacht Company, San Diego. She is 120'6" long; 27'6" beam.

A 600-hp. 6 cyl. Enterprise is the propulsion unit, while three General Motors auxiliaries supply power for bait pumps, refrigeration, etc. The refrigeration system handles a pay load of tuna up to 250 tons.

Sea-Preme was a steel hook-and-liner, designed by W. P. Trammell, and built by National Steel & Shipbuilding Company. She is 127' long; has a beam of 30'6" and depth of 14'6". Owner is Ocean Fisheries, Inc.

She is driven by a Model DMG Enterprise 8 cyl., supercharged. Tail shaft is 6 3.8" Monel, held in Goodrich Cutless bearings. Assisting power for auxiliaries is provided by two Murphy diesels, 6 cyl., directly turning; 33-kw. alternating current generators. Bait pumps are combined with brine in this circulating system, with 16 pumps in all, and with twelve of these 4 by 5, by 5-hp. motors directly concerned with refrigeration.

The chilling system in the *Sea-Preme* is another Baker layout, handling at zero temperatures or below, 330 tons of tuna in the round. There are four Model 8-A Baker compressors, driven by 25-hp. motors.

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Berth 79, Fishermen's Co-operative Assn. Bldg.
San Pedro, Calif.
Phone: TE. 2-7505

SARDINES

Dearth of sardines in California waters in 1952 reduced sardine canning to negligible levels.

Down-swing of abundance carried America's most productive fishery of a few years ago down to a few thousand tons, and saw the entire season for the entire state produce no more fish than would be taken in a fair night's fishing a few years ago.

Intensity of the failure is matched by that of the research and conservation program being invoked to offset it and to guard against its repetition in future years.

SARDINE canning sank to low levels in California in 1952 as the fishery failed throughout all the waters of the state.

From Point Reyes to Point Loma, less than 5,000 tons of sardines were taken in the year, where a few years ago this quantity would have been counted only a fair night's fishing at either San Pedro, Monterey or San Francisco.

The pack of 99,000 cases in 1952 compared with more than 3 million cases in 1951 and 5.4 million cases in 1950—the all-time peak year for sardine canning in California.

The catch of 4,500 tons compares with an all-time top of 791,000 tons in the season of 1936-7.

Although sardine production at San Francisco and Monterey began to decline alarmingly in 1945, and fell to disastrous limits in the years following, it was not until 1951 and 1952 that the full force of the failure was felt in Southern California.

In 1951, by diverting every possible fish—and as much of every fish as possible—to the canning department, the Southern California operators managed to put up a very substantial pack.

In 1952, however, the catch of fish fell to such low levels that even the most thrifty methods could not lift the pack above the 100,000-case mark.

Sardine Solution Sought By Concentrated Research

Never in the history of aquatic biology as a science has such a research program been concentrated upon a single biological problem as that brought to bear upon the California sardines. Recognizing the seriousness of the situation, and the challenge it left to science and industry alike, the State of California is answering with an enterprise never before matched in this field of research.

The only factor to throw even a glimmer of hope on the sardine scene was that northern California waters in 1952 produced a bumper harvest of anchovies, and about 10 canneries in Monterey, Moss Landing, and San Francisco packed. In the Monterey Bay area about $5,374,527 changed hands in the anchovy business—the biggest cannning in history of a fish that used to be a "pest" to sardine fishermen, and wasn't canned at all.

According to canners, the margin of profit on anchovies is small, and almost the entire pack was shipped to the Philippines under sardine labels.

Up to Nov. 18, 1952, the pack of anchovies at Monterey had been about 422,150 cases, with several thousand more cases packed at San Francisco and Moss Landing. Since June the tonnage of anchovies landed at Monterey had been 16,886.

Canners say that 300 persons can put up 10,000 cases of sardines per day but can only pack 3,000 cases of anchovies in the same period of time, because the fish are smaller.

1952-CALIFORNIA SARDINE PRODUCTION-1952

Month	San Francisco Area				Monterey Area				San Pedro & San Diego				GRAND TOTAL
	Tons of Fish	Cases 1-lb. Ovals	Cases Other Sizes	Total Cases	Tons of Fish	Cases 1 lb. Ovals	Cases Other Sizes	Total Cases	Tons of Fish	Cases 1-lb.Ovals	Cases Other Sizes	Total Cases	(Equivalent to 48 1-lb. cans)
January	...	...	...	...	...	...	...	...	1,329	9,842	20,454	30,296	29,168
August	...	...	...	...	...	...	...	...	...	...	...	...	...
September	...	...	...	...	...	...	...	...	...	...	...	...	...
October	...	...	...	...	159	3,015	...	3,015	1,683	25,944	9,143	35,087	37,978
November	...	...	...	...	126	2,655	...	2,655	703	13,396	1,819	15,215	17,838
December	...	...	...	...	...	...	...	...	561	12,285	493	12,778	12,778
Fall Total	...	...	...	...	285	5,670	...	5,670	2,947	51,625	11,455	63,080	68,504
Grand Total	...	...	...	...	285	5,670	...	5,670	4,276	61,467	31,909	93,376	97,672

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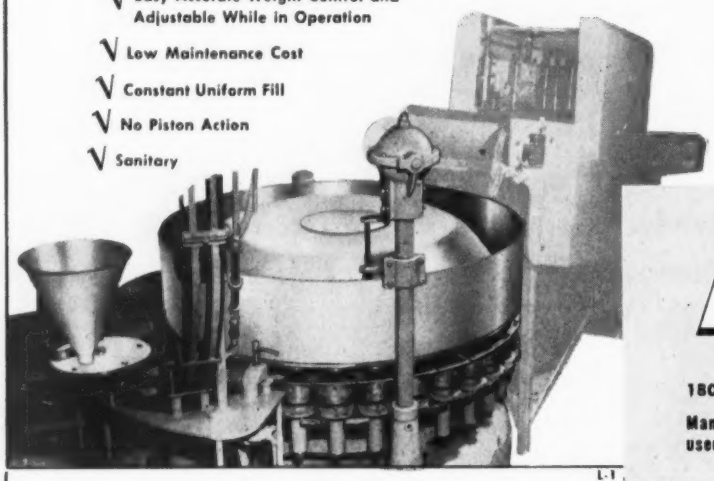

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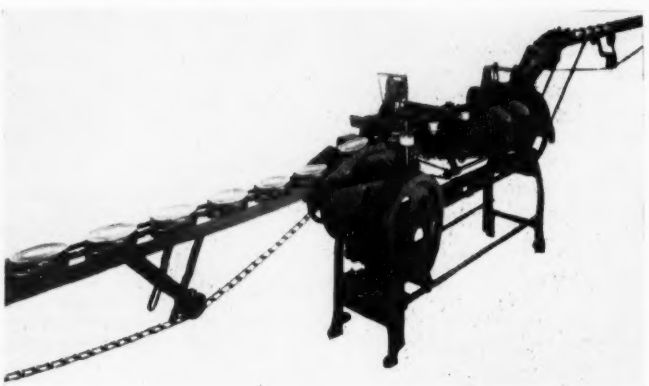

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CALIFORNIA CANNED SARDINE PACK

(Cases)

YEAR	MONTEREY AND SAN FRANCISCO BAY DISTRICT							SAN PEDRO DISTRICT						SAN DIEGO DISTRICT	GRAND TOTAL	YEAR
	1-lb. Ovals	1-lb. Talls	½-lb.Cans Misc.	½-lb. Fillets	5-oz. Talls	Other Sizes	TOTAL	1-lb. Ovals	1-lb. Talls	½-lb.Cans Misc.	5-oz. Talls	Other Sizes	TOTAL	TOTAL		
1912	17,702	. . . .	. . . .	. . . .	. . . .	1,072	18,774	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	18,774	1912
1913	73,686	. . . .	. . . .	. . . .	. . . .	. . . .	73,686	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	73,686	1913
1914	80,834	. . . .	. . . .	. . . .	. . . .	. . . .	80,834	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	80,834	1914
1915	46,625	. . . .	. . . .	. . . .	. . . .	609	47,234	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	47,234	1915
1916	97,100	. . . .	. . . .	. . . .	. . . .	8,532	105,632	2,512	. . . .	. . . .	. . . .	3,296	5,808	54,655	166,095	1916
1917	331,065	. . . .	. . . .	. . . .	. . . .	29,809	363,472	131,347	. . . .	. . . .	. . . .	546,033	679,120	147,602	1,190,194	1917
1918	593,448	. . . .	. . . .	. . . .	. . . .	26,151	619,609	325,587	. . . .	. . . .	. . . .	433,374	758,961	106,418	1,484,979	1918
1919	805,884	. . . .	. . . .	. . . .	. . . .	27,084	832,968	125,784	. . . .	. . . .	. . . .	105,741	231,514	87,033	1,151,515	1919
1920	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	706,726	. . . .	. . . .	. . . .	. . . .	. . . .	244,900	111,370	1,062,996	1920
1921	287,954	. . . .	. . . .	. . . .	. . . .	10,975	298,929	77,048	. . . .	. . . .	. . . .	3,765	80,813	9,370	389,112	1921
1922	353,188	. . . .	. . . .	. . . .	. . . .	1,479	354,667	340,938	. . . .	. . . .	. . . .	6,096	347,034	27,140	729,034	1922
1923	580,984	. . . .	. . . .	. . . .	. . . .	10,001	590,985	490,064	. . . .	. . . .	. . . .	2,769	492,833	48,205	1,132,023	1923
1924	631,774	. . . .	. . . .	. . . .	. . . .	22,416	654,190	693,133	. . . .	. . . .	. . . .	4,491	697,624	63,624	1,420,128	1924
1925	737,743	. . . .	. . . .	. . . .	. . . .	37,119	774,862	920,191	. . . .	. . . .	. . . .	2,685	922,876	56,041	1,753,779	1925
1926	1,158,133	. . . .	31,483	. . . .	. . . .	2,867	1,192,483	861,088	. . . .	. . . .	. . . .	21,702	861,481	88,419	2,163,755	1926
1927	1,341,872	. . . .	36,363	237	17,808	826	1,397,106	1,046,453	. . . .	. . . .	119,815	. . . .	1,166,268	62,038	2,625,412	1927
1928	1,511,535	4,569	43,754	159	80,252	2,495	1,642,764	945,676	9,652	. . . .	146,724	. . . .	1,099,052	73,514	2,815,330	1928
1929	2,039,526	54,618	16,969	11	75,101	2,187	2,188,412	1,438,159	76,271	8,072	168,039	33,753	1,724,294	28,753	3,941,459	1929
1930	1,579,408	74,043	19,692	391	141,524	3,751	1,818,809	863,254	106,460	2,909	228,965	8,138	1,209,726	40,989	3,069,524	1930
1931	1,004,215	43,722	11,280	. . . .	40,375	337	1,099,929	498,996	59,853	11,931	119,930	1,467	691,637	3,425	1,794,991	1931
1932	459,756	4,467	3,276	88	17,726	2,528	487,481	415,874	36,292	. . . .	54,197	. . . .	506,363	7,641	1,001,845	1932
1933	838,533	47,575	4,604	. . . .	38,013	1,532	930,217	365,750	57,969	. . . .	53,996	4,336	482,051	10,592	1,422,860	1933
1934	1,091,158	48,769	6,527	8,361	67,913	2,675	1,225,413	531,619	119,506	. . . .	164,735	. . . .	815,860	10,463	2,051,736	1934
1935	1,126,466	218,523	39,566	91,525	128,168	27,704	1,631,952	615,808	135,531	25,519	112,264	251	889,373	11,437	2,532,762	1935
1936	1,089,683	202,148	89,280	113,516	124,490	41,946	1,661,063	586,038	259,793	132,488	156,649	749	1,135,717	22,863	2,819,643	1936
1937	679,317	227,806	51,068	73,785	68,164	9,284	1,109,424	761,776	634,215	263,729	200,060	1,509	1,861,289	12,491	2,983,204	1937
1938	721,036	58,168	104,419	97,277	154,488	16,287	1,151,675	600,532	318,691	212,064	162,245	. . . .	1,293,532	19,056	2,464,263	1938
1939	1,248,747	310,168	125,251	141,900	138,217	28,538	1,992,821	627,524	308,896	217,100	178,072	1,520	1,333,112	229	3,326,162	1939
1940	933,955	249,195	158,300	151,518	225,975	18,384	1,737,327	664,241	398,960	230,771	156,681	72	1,450,725	37	3,188,089	1940
1941	1,601,506	1,092,720	234,093	182,703	296,568	54,961	3,462,551	689,210	870,256	216,972	151,384	2,136	1,929,958	2,775	5,395,284	1941
1942	802,795	663,309	8,283	75,386	94,755	59,695	1,704,223	619,881	1,342,030	85,776	90,672	2,918	2,141,277	1,285	3,846,785	1942
1943	1,045,451	832,934	128,438	. . . .	20,208	36,037	2,063,068	400,504	846,314	44,516	26,507	2,235	1,320,076	697	3,383,841	1943
1944	1,051,397	1,088,918	61,828	20,584	374	18,255	2,241,356	434,414	963,551	23,297	. . . .	1,040	1,422,302	. . . .	3,663,658	1944
1945	766,554	951,346	81,019	10,075	. . . .	102,391	1,911,385	444,649	1,480,175	48,215	. . . .	. . . .	1,973,039	. . . .	3,884,424	1945
1946	123,063	171,698	39,376	10,233	. . . .	9,050	353,420	602,008	2,073,679	73,125	. . . .	. . . .	2,748,812	. . . .	3,102,232	1946
1947	108,289	71,691	72,995	155,677	. . . .	4,181	412,833	510,760	802,243	29,327	57,260	. . . .	1,399,590	1,627	1,814,050	1947
1948	400,841	197,865	527,346	16,645	. . . .	994	1,143,691	611,927	970,569	347,991	120,413	. . . .	2,050,900	6,587	3,201,178	1948
1949	869,104	491,196	344,148	12,434	127,741	6,291	1,850,914	822,053	1,112,939	194,690	305,438	. . . .	2,435,120	. . . .	4,286,034	1949
1950	427,416	224,569	6,533	44,843	99,657	24,179	827,197	1,476,695	2,256,213	355,087	451,365	63,882	4,603,242	. . . .	5,430,439	1950
1951	377,754	75,721	2,785	12,285	95,257	7,120	570,922	1,030,080	971,971	74,273	368,611	36,785	2,481,720	. . . .	3,052,642	1951
1952	5,660	10	. . . .	. . . .	. . . .	. . . .	5,670	61,467	22,914	2,592	3,339	3,064	93,376	. . . .	99,046	1952

NOTE: — Figures for 1952 are preliminary totals from official sources. Those for previous years have been corrected from statistics of the California Division of Fish and Game. Full segregation of the various sizes is not available for years prior to 1926 and is estimated for 1950. Figures for years prior to 1950 are given in cases "as they run," without reduction to standard cases. The great majority of the production, however, consists of 48-lb. cases. Figures for "Other Sizes" in 1950 have been reduced to standard cases, equivalent to cases of 48-1-lb. ovals.

* Where sizes are not segregated, they are combined with 1-lb. talls.

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SOUTH COAST FISHERIES, INC.

TERMINAL ISLAND
CALIFORNIA

Fishermen were receiving $42.50 per ton.

Sardine Fishing Blank

Although the price of sardines to fishermen was settled in Monterey, Aug. 15, nothing happened. The season was supposed to have opened Aug. 1, the official date, but fishermen were late in getting back from fishing salmon in Alaska, and there was no eagerness to come to terms with processors.

It was agreed that the price per ton for sardines delivered in southern California ports for northern California processing was to be $60. Frank Cardinale, president, Monterey Purse Seine Association, the boat owners' group said other prices settled were $42.50 for anchovies, $50 for herring, $65 for jack mackerel and $75 for blue mackerel.

Working agreements between fishermen and boat owners were virtually the same as in 1951; but a cannery workers wage agreement, calling for a 3c hourly wage increase for women, and a 5c hourly wage increase for men, and a $10 per month increase for salaried workers was reached with processors.

About 22 boats in the Monterey fleet fished anchovies on limits averaging 25 tons.

At San Francisco there were no sardines, but three San Francisco canneries received anchovies on 10-ton limits from a small fleet of San Francisco-based purse seiners.

For the first time in the memory of old timers in the northern California sardine industry, not a single sardine was caught in that area during the first two months of the season —August and September.

Some eight plants canned anchovies in Monterey, one in Moss Landing and three in San Francisco. The San Francisco catch was coming from right outside the Golden Gate, and Monterey fish were coming from Pt. San Pedro, just south of San Francisco.

At one time there were 16 canneries and 14 reduction plants on Monterey's Cannery Row, and about 30 plants on San Francisco Bay.

Anchovy landings in Monterey, Moss Landing, and San Francisco, amounted to 20,914 tons January, 1952, through November.

Pack for the same period in the same areas, was 287,235 cases of 5-oz. 100s; 172,473 cases of 8-oz. 48s; and 90,850 cases of 15-oz. 48s.

Sardine Prospects Bleak For Immediate Future

A bleak prospect is faced by the California sardine industry for the 1953-54 season and possibly longer, according to California fisheries of the state's Marine Research Committee.

According to the scientists, if the

California Sardine Industry

	Catch, Tons	Oil, Gallons	Meal, Tons	Case Pack, 1-lb. Ovals or Equiv.
1937-38 SEASON				
San Francisco District	132,248	4,659,147	23,058	160,977
Monterey District	104,464	3,067,587	15,383	828,737
San Pedro - San Diego District	109,122	1,448,543	14,540	1,310,715
Season TOTALS	345,834	9,175,277	52,981	2,300,429
1938-39 SEASON				
San Francisco District	200,361	7,804,909	34,751	224,112
Monterey District	180,090	5,462,066	28,859	1,063,383
San Pedro - San Diego District	148,125	2,235,082	22,603	1,286,301
Season TOTALS	528,576	15,502,057	86,213	2,573,776
1939 - 40 SEASON				
San Francisco District	211,471	9,313,706	36,324	286,639
Monterey District	227,231	7,090,963	34,568	1,763,401
San Pedro - San Diego District	93,176	985,323	12,161	1,084,928
Season TOTALS	531,878	17,389,992	83,053	3,134,968
1940-41 SEASON				
San Francisco District	117,817	4,809,853	20,541	288,413
Monterey District	165,145	5,197,570	25,805	1,219,846
San Pedro - San Diego District	171,747	2,390,887	24,776	1,608,207
Season TOTALS	454,709	12,398,310	71,122	3,116,466
1941-42 SEASON				
San Francisco District	185,921	7,162,343	29,935	854,709
Monterey District	249,717	7,222,683	36,309	2,429,804
San Pedro - San Diego District	147,825	2,113,939	18,859	1,870,601
Season TOTALS	583,463	16,498,965	85,103	5,155,114
1942-43 SEASON				
San Francisco District	115,586	4,467,454	19,114	413,165
Monterey District	183,158	5,590,335	28,255	1,429,652
San Pedro - San Diego District	202,597	3,090,994	29,614	1,862,073
Season TOTALS	501,341	13,148,783	76,983	3,704,890
1943-44 SEASON				
San Francisco District	126,132	5,018,816	20,064	425,487
Monterey District	212,383	6,578,416	32,840	1,563,036
San Pedro - San Diego District	135,007	2,185,779	20,608	1,161,750
Season TOTALS	473,522	13,783,011	73,512	3,150,273
1944-45 SEASON				
San Francisco District	136,337	5,616,063	22,258	271,528
Monterey District	234,613	8,305,401	34,920	887,190
San Pedro - San Diego District	177,465	3,781,148	26,795	1,102,662
Season TOTALS	548,415	17,702,612	89,973	2,261,380
1945-46 SEASON				
San Francisco District	83,483	3,581,808	12,765	456,001
Monterey District	142,282	4,803,560	20,297	1,220,579
San Pedro - San Diego District	170,325	2,846,216	23,481	2,073,963
Season TOTALS	396,090	11,231,584	56,543	3,750,543
1946-47 SEASON				
San Francisco District	2,846	65,002	519	6,590
Monterey District	26,818	755,674	3,893	155,329
San Pedro - San Diego District	198,052	3,314,193	26,870	1,931,544
Season TOTALS	227,716	4,134,869	31,182	2,093,463
1947-48 SEASON				
San Francisco District	383	4,440	37	5,793
Monterey District	14,492	260,375	1,756	222,867
San Pedro - San Diego District	95,362	1,458,983	11,762	1,258,660
Season TOTALS	110,237	1,723,798	13,555	1,487,320
1948-49 SEASON				
San Francisco District	1,688	16,590	127	34,197
Monterey District	52,203	783,627	5,566	914,624
San Pedro - San Diego District	127,350	1,436,939	13,301	2,113,897
Season TOTALS	181,241	2,237,156	18,994	3,062,718
1949-50 SEASON				
San Francisco District	17,798	607,004	2,917	81,040
Monterey District	133,570	3,431,286	17,513	1,606,767
San Pedro - San Diego District	186,392	2,402,760	23,343	2,632,305
Season TOTALS	337,760	6,441,050	43,773	4,320,112
1950-51 SEASON				
San Francisco District	.....	538,132	2,408	67,698
Monterey District	.....	1,132,643	6,443	759,172
San Pedro - San Diego District	.....	4,802,054	34,660	4,444,120
Season TOTALS	.....	6,472,829	43,511	5,270,990
1951-52 SEASON				
San Francisco District	321	6,350	32	4,342
Monterey District	24,864	327,149	2,217	495,542
San Pedro - San Diego District	101,356	1,121,770	10,855	1,867,978
Season TOTALS	126,541	1,455,269	13,104	2,367,862
OFF-SHORE FLOATING REDUCTION PLANTS (not included above)				
1936-37 Season	239,257	9,034,041	39,876	.....
1937-38 Season	74,334	2,479,731	12,389	.....
1938-39 Season	57,212	2,021,810	9,535	.....

sardine industry depends on that fish alone, it must subsist for the next two seasons on the smallest catches in a generation. The only hope for improvement in the 1952-1953 and 1953-1954 seasons is an unexpected increase in the catch of older sardines.

The scientists reported that only the 1948 year class offers much hope. The 1949 class is about one-sixth the size of the 1948 class, while 1950 and 1951 classes are only slightly better than the 1949 class.

Agencies participating in the sardine research program are the California Academy of Sciences, the California Department of Fish & Game, Hopkins Marine Station of Stanford University, the U. S. Fish & Wildlife Service, and the University of California's Scripps Institution of Oceanography.

The California Academy of Sciences is studying sardine behaviour, while the Hopkins Station is looking into oceanography of the Monterey area. The Scripps' Institution's share of the program is the study of oceanography of the Pacific Coast and investigations of the food habits of sardines.

The Department of Fish and Game and the U. S. Fish & Wildlife Service are studying eggs and larvae of the sardine, the numbers of young fish in coastal waters, and statistics of the commercial catch.

It is pointed out in the report that most of the sardine spawning today is occurring off Baja California, particularly off Ceros Island about halfway down that coast.

Blame for the slump in sardine catches is not placed on any one factor in the report. The scientists say that more work must be done before arriving at any definite answers about the sardine's future.

Restoration of Resource Objective of Industry

The Sardine and Mackerel Industry Advisory Committee, meeting with all factors of the sardine industry in November, 1952, made it appear likely that that fishery, along with Pacific mackerel, jack mackerel and anchovies, would be brought under a management plan devised by the Marine Research Committee and administered by the Fish and Game Commission.

As this was written, it appeared certain the legislature would be requested to give full power of regulation over these fisheries to the Marine Research Committee and the Fish and Game Commission for two years; and that these bodies have in mind seasonal bag limits for all four species.

Chairman of the Marine Research Committee is Julian G. Burnette, Richmond Fisheries; D. T. Saxby, California Packing Corporation; W. W. Ambrose, the Ambrose Company; Paul Denny, Fish and Game Commission; Dr. Robert C. Miller, California Academy of Sciences; Richard S. Croker, Bureau of Marine Fisheries; J. R. Biven, Coast Fisheries Division, Quaker Oats Co.; Seth Gordon, Department of Fish and Game; and John V. Morris, French Sardine Co.

A sub-committee preparing a plan to present to the full committee and the state legislature was composed of John Real, Fishermen's Cooperative Association, San Pedro, chairman; Herbert C. Davis, Terminal Island Sea Foods, Ltd.; John Hawk, AFL cannery workers and AFL fishermen; Vince Quarteraro, Santa Cruz, sportsman; Senator Ed Johnson, Marysville, the legislature; and Richard S. Croker, chief, Bureau of Marine Fisheries, Department of Fish and Game.

Pacific Mackerel Supply Becomes of Some Concern

The concern over dwindling supplies of Pacific mackerel and possible scarcity of anchovies and jack mackerel was indicated by the committee's inclusion of these fisheries in the management proposal. It called for investment of full regulatory powers over the four species in the fish and game commission, acting upon maximum-minimum season and bag limit recommendations of the Marine Research Committee.

OXNARD CANNERS INC.
Monterey, California
CANNED FISH PRODUCTS
TUNA SARDINES JACK MACKEREL ALBACORE
MACKEREL ANCHOVIES HERRING SQUID
"Arch Rock" Brand "Sea Belle" Brand "Oxnard" Brand
"Southern Gem" Brand "Oxnard Canners" Brand "Naval" Brand
FISH MEAL and FISH OIL
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CALIFORNIA Canned Fish, Canned Fruits and Vegetables

Six Failure Years Change Face of Industry

As could be expected, the sixth season of sardine draught took a heavy toll among northern California's canneries and reduction plants.

In November it was announced that the big Monterey plant of Westgate-Sun Harbor Co. would be dismantled.

Other canneries in Monterey to be liquidated were Custom House Packing Co., founded in the early 1920s; Aeneas Canning Co., and California Frozen Fish Co.

At the end of the year the famous San Carlos Canning Co., Monterey, once one of the largest producers of canned sardines in California was sold to a syndicate headed by Lynn Howard, Pebble Beach, Calif., for a price exceeding $200,000.

Mr. Howard was formerly associated in the automobile business with his father, C. S. Howard, who for many years was the distributor of Buick automobiles in California.

It was not announced, as *Pacific Fisherman Yearbook* went to press who the officers of the company managing the plant would be, whether or not the plant would pack fish, or who was to be general manager.

Another sale during the year of a well known sardine cannery was that of Keystone Fisheries, Inc., Pier 92, San Francisco, which was purchased by a group of San Jose fruit and vegetable canners headed by J. F. Matalone and Martin Scarpace.

At Moss Landing the Port Costa Packing Co. was taken over by the Pacific Vegetable Oil Corporation during the year.

The California Packing Corporation acquired the cannery formerly operated at Oxnard, Calif., by the San Carlos Canning Co. of Monterey.

Acquisition of the Oxnard properties by Calpak marks the return of this firm, best known for its nationally known Del Monte Brand to the southern California area. Prior to the war, the company maintained tuna canning facilities in San Diego.

Mrs. Susie Varien, daughter of Peter Ferrante, pioneer Monterey fisherman and one of the founders of Oxnard Canners, Inc., was elected to the presidency of that firm—one of the largest fish canneries in Monterey.

James Tolagson, who was associated with the company for a number of years, was appointed vice-president and general manager.

W. O. Lunde, for 28 years associated with Hovden Food Products Corp., Monterey, and Moss Landing, was elected president of the company.

K. Hovden was associated with the late F. E. Booth in the first sardine cannery at Monterey around the turn of the century. Later on, Mr. Hovden went into business for himself and continued until 1952.

VALUE OF PRINCIPAL CANNED FISH PRODUCTS

Year	PACIFIC SALMON			SARDINES		Pacific Tuna	Mackerel	Oysters	Shrimp	Clams	Crabs	Miscellaneous Fish Products	GRAND TOTAL
	Pacific Coast States	Alaska	Total	New England States	California								
1921-25*	$11,660,592	$29,457,922	$40,518,514	$9,781,523	$4,428,409	$8,751,385	$.....	$2,704,433	$3,928,434	$1,721,051	$71,087	$1,533,481	$66,457,317
1926-30*	12,772,490	38,329,082	51,101,572	6,281,996	9,494,787	8,990,774	979,927	2,344,687	5,022,925	2,511,544	36,129	2,700,368	89,374,509
1930-35*	7,301,890	28,513,777	35,815,667	2,974,505	4,519,462	8,646,033	2,117,791	1,392,686	3,636,331	2,242,896	109,225	2,649,056	64,303,662
1936	5,309,438	44,751,633	50,061,071	5,740,454*	7,302,273	14,715,391	3,542,895	2,180,869	4,672,198	2,976,297	130,753	3,242,053	94,564,254
1937	8,386,165	44,547,769	52,933,934	4,998,373	8,592,117	18,995,779	2,673,608	2,932,681	7,130,747	3,013,446	269,699	3,634,551	105,174,935
1938	5,728,892	36,636,897	42,365,789	2,367,045	7,102,358	15,163,636	2,896,220	1,866,476	4,872,393	3,189,626	260,134	3,322,210	83,445,889
1939	7,339,727	34,441,122	41,780,849	7,075,096	9,553,663	20,079,567	2,568,650	2,376,945	5,397,662	3,798,319	239,756	3,714,998	96,627,550
1940	6,575,176	31,474,492	38,049,668	3,736,394	8,975,257	23,727,560	4,101,369	2,526,859	4,318,325	3,778,363	308,890	4,659,256	94,181,941
1941	11,199,317	56,217,601	67,416,918	12,590,958	18,091,873	19,397,887	3,503,718	2,997,114	4,682,544	3,711,029	547,617	5,659,466	136,684,157
1942	13,673,968	46,300,209	61,974,177	12,162,451	15,509,964	30,742,493	3,693,082	3,596,703	5,360,047	3,791,058	1,755,065	4,893,004	144,996,947
1943	5,110,647	57,824,267	62,935,114	11,104,570	14,352,359	31,430,189	5,271,203	2,821,556	7,347,330	2,802,420	1,194,483	4,334,390	141,186,792
1944	5,167,136	51,196,140	56,363,276	14,619,803	15,225,919	40,836,117	7,033,997	2,283,429	5,360,047	3,820,612	1,361,458	6,983,035	152,914,237
1945	7,942,102	44,644,303	52,586,405	12,077,201	15,346,472	47,407,451	4,046,691	2,029,953	4,854,799	7,391,098	683,767	9,669,714	152,800,571
1946	17,003,439	53,157,194	70,160,633	20,275,590	19,895,649	59,135,823	7,575,291	5,249,272	8,428,735	11,145,047	4,720,119	21,770,334	227,529,455
1947	31,969,134	88,669,542	120,638,676	28,310,674	16,538,375	90,609,175	15,018,633	4,259,485	8,192,004	8,642,235	2,705,391	16,398,742	310,678,920
1948	24,008,466	96,528,730	120,537,196	29,359,114	21,892,893	112,612,296	9,650,834	4,777,531	7,791,313	8,329,639	4,646,494	18,621,357	336,181,479
1949	22,167,812	81,263,168	103,430,980	21,051,675	21,334,825	97,710,325	6,848,930	6,525,207	11,203,325	8,779,018	3,490,885	15,128,735	298,503,905
1950	27,187,060	81,403,511	108,590,571	21,209,033	26,345,609	112,830,094	7,491,815	7,362,831	12,916,397	10,639,889	3,214,713	19,562,101	330,362,853
1951	29,388,514	79,237,355	108,625,869	14,635,352	19,362,744	96,540,290	6,259,222	6,154,235	12,962,599	11,779,909	3,693,490	21,802,585	301,210,295

*Average

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President, National Fisheries Institute
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(Photo, Karsh, Ottawa)

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Seattle
President, Fishermen's Packing Corporation
President, Purse Seine Vessel Owners Association

MACKEREL

With Jack Mackerel carrying the load, California mackerel canning in 1952 had one of its best years in history, the pack of more than 1.5 million cases ranking second only to that of 1935.

Good volume in mackerel served in a measure to offset the failure in sardines, and to provide an important supply of low-cost canned fish for the market usually depending on sardines.

BIG YEAR status was won by 1952 in mackerel packing, with an abundant production exceeded only once in the history of that California fishery.

The pack was of utmost importance to the industry—fishermen and operators alike — because it came at a time when the sardine business was at its lowest ebb and the fishermen in need of fish to catch, and the packers of fish to sell.

Jack mackerel accounted for the great majority of the pack. Lack of greater volume in the catch of Pacific mackerel occasioned some uneasiness; and as 1953 opened there was good prospect that both Jack and Pacific mackerel might be included with sardines in the provisions of a special law by which the California Fish and Game Commission would be charged with full authority and responsibility for conservation measures designed to protect the future of these fisheries.

Mackerel fishing and packing proved a "life-saver" for sardine-hungry fishermen and packers in 1952. Although the fishery started off so poorly that predictions were freely made it would be an off year, by mid-summer fishing picked up, and by November 30 over 80,000 tons had been delivered to California plants, mainly Southern California, and over 1,500,000 cases packed.

It was one of the best years in Mackerel-fishing history for California. The best was in 1935, when 1,761,236 cases were produced; next was 1947, with 1,522,199 cases.

The year began with these raw prices: Pacific, $60 per ton; Jack $55. A succession of small raises brought the raw fish at year's end to: Pacific $80; Jack $70.

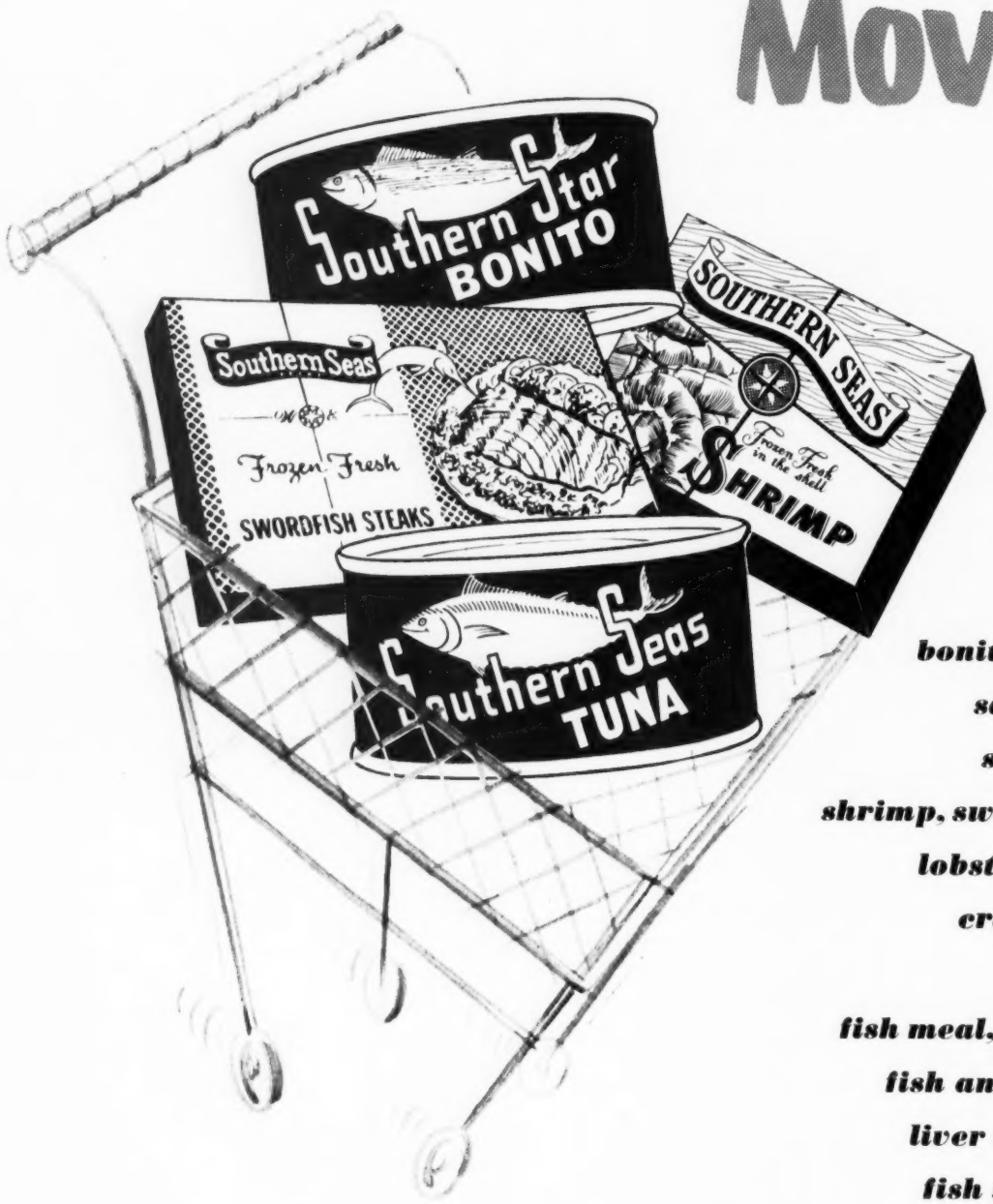
Opening quotations on the canned product: Pacific, talls, natural, 48, $7.40; Jack, talls, $6.00 to $6.75. Some

CALIFORNIA CANNED MACKEREL

Year	SAN PEDRO DISTRICT			SAN DIEGO DISTRICT			MONTEREY	GRAND TOTAL	Year
	*1-lb.Cans (Full Cases)	†Other Size Cans (Full cases)	Total (Full cases)	1-lb. Cans (Full Cases)	Other Size Cans (Full Cases)	TOTAL (Full Cases)	Total (Full cases) ‡	(Full Cases)	
1926	....	268	268	4	5	9	....	277	1926
1927	10,725	....	10,725	....	118	118	....	10,843	1927
1928	357,136	2,337	359,473	25,110	239	25,349	1,030	385,852	1928
1929	477,570	27,006	504,576	86,246	3,720	89,966	1,476	595,572	1929
1930	122,870	....	122,870	4,250	39	4,289	117	127,276	1930
1931	100,912	....	100,912	305	....	305	....	101,217	1931
1932	84,385	4,058	88,443	184	....	184	....	88,627	1932
1933	578,902	38,163	617,065	100,883	4,729	105,612	7,722	730,309	1933
1934	942,507	126,538	1,069,045	115,654	12,303	127,957	61,083	1,257,085	1934
1935	1,409,922	195,771	1,605,693	105,081	4,436	109,517	46,026	1,761,236	1935
1936	990,360	60,250	1,050,610	113,075	9,533	122,608	55,139	1,228,357	1936
1937	727,656	14,309	741,965	30,482	3,011	33,493	13,856	789,314	1937
1938	828,284	71,741	900,025	44,856	3,125	47,981	5,643	958,649	1938
1939	869,474	20,323	889,797	73,608	1,247	74,855	2,604	967,256	1939
1940	1,311,778	47,304	1,359,082	39,467	768	40,235	142	1,399,459	1940
1941	811,467	6,096	817,563	19,484	....	19,484	6,700	843,747	1941
1942	579,053	9,479	588,532	17,456	3,663	21,119	4,539	614,190	1942
1943	827,040	....	827,040	4,255	.. .	4,255	7,997	839,312	1943
1944	970,772	13,324	984,096	266	....	266	2,060	986,422	1944
1945	584,318	1,658	585,976	....	....	....	3,641	589,617	1945
1946	602,458	33,772	636,230	....	....	....	80,438	716,668	1946
1947	1,298,820	58,589	1,357,409	....	....	....	164,790	1,522,199	1947
1948	767,662	43,668	811,330	224	101	325	158,991	970,646	1948
1949	853,433	15,968	869,401	....	....	....	54,703	924,104	1949
1950	1,059,877	17,940	1,077,817	....	....	....	331,628	1,409,445	1950
1951	988,139	28,091	1,016,230	....	....	....	24,070	1,040,300	1951
1952	1,574,705	45,480	1,620,185	....	....	....	...	1,620,185	1952

* Practically all in 1-lb. Talls † Largely 1/2-lb. Flats. ‡ Includes San Francisco.
NOTE: — Pacific Mackerel and Jack Mackerel are combined in this table. District segregation for 1951 not available.

Brands that Move!



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fish and shark
liver oils and
fish solubles

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1952-California Mackerel Pack-1952

PACIFIC MACKEREL				MONTH	JACK MACKEREL				All Mackerel Cases
Pounds Delivered	Cases 1-lb. Cans	Cases Other Sizes	Total Cases		Pounds Delivered	Cases 1-lb. Cans	Cases Other Sizes	Total Cases	
84,000	1,400	...	1,400	January	5,934,000	39,722	12,380	52,102	53,502
...	634	...	634	February	406,000	2,665	175	2,840	3,474
22,000	121	...	121	March	4,060,000	7,269	1,435	8,704	8,825
40,000	1,371	1,548	2,919	April	7,536,000	44,235	2,747	46,982	49,901
890,000	6,474	1,650	8,124	May	5,408,000	36,652	2,505	39,157	47,281
1,804,000	16,295	47	16,342	June	3,292,000	40,455	2,087	42,542	58,884
6,100,000	57,347	...	57,347	July	8,556,000	57,074	1,103	58,177	115,524
3,394,000	44,103	680	44,783	August	17,244,000	157,164	621	157,785	202,568
1,994,000	24,449	...	24,449	September	38,472,000	363,371	1,025	364,396	388,845
2,896,000	37,867	1,000	38,867	October	19,738,000	204,347	8,695	213,042	251,909
1,176,000	38,572	383	38,955	November	33,386,000	315,518	5,723	321,241	360,196
2,092,000	38,600	400	39,000	December	2,118,000	39,000	1,276	40,276	79,276
20,492,000	267,233	5,708	272,941	Totals	146,150,000	1,307,472	39,772	1,347,244	1,620,185

ovals, in tomato sauce was packed throughout the year for export trade. It was quoted at a top of $8.75.

During the late winter and throughout the spring months mackerel was a scarce item at the unloading docks of Los Angeles and Long Beach Harbors. March for example, saw only 953 tons unloaded. In March the California Fish and Game Department increased the research tax from 50c to $1 per ton, this for use by the Marine Research Committee. (This also applied to sardines, anchovies, etc.)

As evidence of the great pick-up in mackerel fishing, the initial six months saw only 15,388 tons delivered and on August 1 the catch was 7,000 tons behind the same period in 1951. However, fishing continued to improve. Raw price went to Pacific, $75; Jack, $65.

August saw 10,026 tons brailed; September was tremendous: 20,233; October, 11,317 and November, 16,886 tons. By that time the pack had topped 1,500,000 cases and December fishing promised to add more canned product.

The great fishing was practically all with Jack mackerel. A discovery made the previous year, but not then worked too intensively contributed largely to the increase. This was out at Cortez and Tanner banks, some 140 miles offshore, where most of the latter netting was done.

Pacific fell sharply behind 1951's 15,000 tons, the catch not much exceeding 10,000 tons for the year. By October 30, the Pacific canned figure for 1952 was 200,000 cases as against 1951's 325,0000 cases.

Final quotations, f.o.b. Southern California were: Pacific, talls, $8.00; Jack, talls, $7.25 per case.

1952-Pacific Canned Shad Pack-1952

Company	Cannery Location	Shad 48 1-lb.	Shad Roe 48 ½-lb.
Barbey Packing Co.	Astoria	57	1,096
Chinook Packing Co.	Chinook	...	8
Columbia River Packers Assn.	Astoria	3,481	1,406
Paragon Packing Co.	Hoquiam	...	30
Point Adams Packing Co.	Hammond	2,644	1,162
Portland Fish Co.	Portland	...	41
Union Fishermen's Pkg. Co.	Astoria	223	250
Total Pacific Northwest		6,405	3,993
CALIFORNIA			
Bell Smoked Fish Co.	San Francisco	...	700
Hickmott Packing Co.	Antioch	2,500	500
Total California		2,500	1,200
Total Pacific Coast		8,905	5,193

Canned Shad and Shad Roe

YEAR	Oregon-Washington		California		TOTAL, PACIFIC COAST		YEAR
	Shad (full cases)	Shad Roe (4-doz. ½'s)	Shad (full cases)	Shad Roe (4-doz. ½'s)	Shad (full cases)	Shad Roe (4-doz. ½'s)	
1920	8,251	892	3,936	908	12,187	1,800	1920
1921	871	6	...	...	871	6	1921
1922	1,410	174	...	...	1,410	174	1922
1923	2,128	826	...	...	2,128	826	1923
1924	4,478	300	3,000	...	7,478	300	1924
1925	6,120	1,672	6,564	4,320	12,684	5,992	1925
1926	14,457	1,416	...	...	14,457	1,416	1926
1927	16,081	830	8,787	...	24,868	830	1927
1928	17,560	3,264	7,475	2,884	25,035	6,148	1928
1929	15,944	2,630	7,005	2,612	22,949	7,242	1929
1930	10,783	1,724	1,792	2,414	12,575	6,138	1930
1931	757	2,156	...	3,442	757	5,598	1931
1932	361	1,614	...	1,714	361	4,328	1932
1933	1,020	976	...	1,314	1,020	2,290	1933
1934	8,098	3,302	...	1,150	8,098	4,452	1934
1935	5,495	2,060	5,068	2,270	10,563	4,330	1935
1936	4,131	2,004	15,124	5,178	19,255	7,182	1936
1937	3,380	1,084	4,677	1,684	8,057	2,768	1937
1938	3,194	1,186	7,655	4,102	10,849	5,288	1938
1939	8,472	2,963	9,193	3,772	17,665	6,735	1939
1940	6,234	4,453	12,187	3,756	18,421	8,209	1940
1941	4,269	3,470	...	100	4,269	3,570	1941
1942	7,713	5,137	20,058	4,887	27,770	10,021	1942
1943	2,249	3,901	11,516	6,252	13,765	10,153	1943
1944	3,806	4,556	12,854	4,171	16,660	8,727	1944
1945	1,810	4,265	...	536	1,810	4,801	1945
1946	9,629	6,589	...	...	9,629	6,589	1946
1947	17,892	7,860	...	...	17,892	7,860	1947
1948	10,537	4,403	828	199	11,365	4,602	1948
1949	13,458	5,826	...	...	13,458	5,826	1949
1950	10,107	5,554	...	...	10,107	5,554	1950
1951	8,990	5,051	1,078	2,104	10,068	7,155	1951
1952	6,405	3,993	2,500	1,200	8,905	5,193	1952

SHAD canning on the Pacific Coast continued in 1952 on a relatively low level of production, due in part to disappointing catches in Oregon waters, notably the Columbia River.

In general, the fresh fish market tended to take the major portion of the shad, although an aggregate 8,900 cases were canned.

Canning of shad roe held close to normal figures despite the tendency of the frozen trade to take this delicacy.

Scarcity of shad on the Columbia River has caused some concern on the part of the fishing industry.

Initiation of a research program designed to show the way to sound shad conservation is anticipated by Oregon and Washington in 1953.

OCEAN GARDEN

frozen-fresh SHRIMP

FROM THE CLEAR BLUE WATERS OF THE GULF OF CALIFORNIA

When you order Ocean Garden frozen-fresh shrimp you are guaranteed:

- Uniform size
- Finest quality
- Delicious, fresh-caught flavor

INSTITUTIONAL PACK

5-pound layer pack has heavy ice-block glaze

CONSUMER PACK

12-ounce Frozen-fresh raw green shrimp

10-ounce Frozen breaded

5-ounce Frozen fried

Thanks to these fine brokerage firms, Ocean Garden Frozen Shrimp has excellent distribution:

BALTIMORE Plaza 8716 Elliott W. Hudgins Co.	**CHICAGO** Superior 7-7585 Stanley J. Remus
LOS ANGELES Michigan 8254 Reinke and Amende	**MINNEAPOLIS** Atlantic 8191 Hutchins Brokerage Co.
NEW YORK Courtland 7-3171 Gordon D. Murphy, Inc.	**PITTSBURGH** Atlantic 1-1883 W. J. Hasselman
SAN DIEGO Franklin 5189 J. J. Camillo	**SALT LAKE CITY** S. L. 4-7898 Eiggren & Thompson Co.
SEATTLE Elliott 1272 Ivar Wendt	**SAN FRANCISCO** Yukon 2-1015 Reinke and Amende
DENVER M 5257 Brown-Weidman Brokerage Co.	**PORTLAND, ORE.** Empire 5053 Marine Specialty Food Products Co.

MARINE PRODUCTS CO. San Diego California

MEXICO
PACIFIC FISHERIES

Problems produced by the rapid development of Mexico's rich Pacific shrimp fisheries in their early years continued to beset the business in 1952, with shortage of shrimp added to and emphasizing the earlier difficulties rising from cost and competition.

Action by the government of Mexico to foster conservation in the rearing areas of the shrimp, and to extend economic consideration to the sea food industries forecasts a brightened future. Despite difficulties, Mexico's progressive operators continue to improve their plants and extend their markets.

MEXICO'S Pacific shrimp fishery was in the doldrums in the Gulf of California as 1952 ended. For the year, with December estimated, the exports to this country through the U.S. Customs ports of entry in Arizona and through San Diego, Los Angeles and San Francisco, did not exceed 20,000,000 lbs. The year of 1951 saw 26,783,285 lbs. cross the international border.

Year of 1952 began poorly and fishing was off from the northern waters of the Gulf of California to Mazatlan. Many companies sent their trawlers to the far-southern fishing grounds in vicinity of Salina Cruz.

The Mexican government dealt the industry a blow when, in addition to existing taxes, it slapped on another export levy amounting to around $75.00 per ton; later it "forgave" one-third of this.

The year opened with premium brands, top quality, layer pack at top prices, and by March the following were quoted: Under 12, f.o.b. West Coast, 90c per lb.; under-15, at 85c; and 16-20 at 80c. There was some fluctuation during the year, and at the close prices were lower: Under-12 to 16-20, 80c; 21-25, 72c; 26-30, 62c; 31-42, 55c.

In view of the decline in yield, the Mexican government declared a closed season for trawling in open waters and cast-netting in the bays and esteros from March 8 to April 8. This included all the coastline of Sonora and Sinaloa and both coasts of Lower California.

Catch and Market Decline Hits Industry

The industry, handicapped by lack

1952-FISHERY PRODUCTS IMPORTED FROM MEXICO-1952

(ENTERED THROUGH CALIFORNIA AND ARIZONA)

Species	Pounds												
	Nov. 1951	Dec. 1951	Jan. 1952	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Total
Fish:													
Cabrilla	...	...	...	1,920	...	...	...	...	19,980	...	...	...	21,900
Corbina	...	...	1,391	...	26,000	23,660	19,154	25,777	1,140	4,279	...	...	101,401
Halibut, Fresh & Frozen	...	...	...	...	...	...	...	...	200	4,954	...	...	5,154
Perch	...	...	...	...	...	...	...	...	...	3,865	11,231	...	15,096
Sea Bass:White & Bl.	...	...	...	...	...	...	...	...	...	25,663	4,860	...	30,523
Totuava	2,794	2,574	20,644	158,631	295,375	11,815	81,870	60,825	6,922	5,900	4,101	...	651,451
Tuna, Albacore	...	...	...	...	...	...	...	...	...	6,584	2,500	...	9,084
Tuna, Yellowfin	...	...	...	...	...	...	27,500	57,000	32,186	...	...	...	116,686
Unclassified Fresh & Frozen	44,602	46,772	94,276	71,263	87,998	165,727	95,025	93,759	176,557	42,132	5,955	22,874	946,940
Dried, salted	...	...	4,225	...	...	2,948	...	...	...	...	...	...	7,173
Total	47,396	49,346	120,536	231,814	409,373	204,150	223,549	237,361	236,985	93,377	28,647	22,874	1,905,408
Shellfish:													
Abalone: Canned	689,616	191,856	242,016	25,380	...	80,200	268,288	482,928	293,676	498,736	298,180	409,374	3,480,250
" Dried	1,800	...	...	...	...	3,800	6,600	13,300	2,870	8,200	1,350	...	37,920
" Fresh & Frozen	1,590	2,200	930	1,605	900	6,125	3,425	13,334	1,520	...	...	...	31,629
Clams, inc'l. clam meat	...	...	...	...	...	18,002	71,233	104,953	92,006	135,289	36,458	...	612,380
" Fresh & Frozen	48,923	40,668	9,992	28,666	26,190	...	...	...	...	190,224	1,650	...	191,874
" Canned	...	...	...	...	...								
Shrimp:Fresh & Frozen													
Fresh & Frozen	4,611,411	3,635,035	2,298,486	1,899,707	1,151,750	671,250	1,656,611	1,680,046	1,736,520	285,150	563,700	2,762,494	22,952,160
Spiny Lobsters	364,300	266,135	365,845	386,525	348,825	...	...	...	...	...	...	128,230	1,859,860
Total	5,717,640	4,135,894	2,917,269	2,341,883	1,527,665	779,377	2,006,157	2,294,561	2,126,592	1,117,599	901,338	3,300,098	29,166,073
Other Fishery Products:													
Livers: Sea Bass	...	...	...	...	10,665	...	2,202	214	...	...	...	...	13,081
Shark	1,379	33,135	640	17,820	283	20,867	19,920	2,510	12,408	8,954	19,579	893	138,388
Shark Fins	2,100	3,419	1,822	2,504	...	2,090	...	...	1,401	2,430	2,024	...	17,790
Total	3,479	36,554	2,462	20,324	10,948	22,957	22,122	2,724	13,809	11,384	21,603	893	169,259
Grand Total	5,768,515	4,221,794	3,040,267	2,594,021	1,947,986	1,006,484	2,251,828	2,534,646	2,377,386	1,222,360	951,588	3,323,865	31,240,740

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CARMEL CANNING CO. — MONTEREY, CAL.
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TERMINAL ISLAND SEA FOODS, LTD. — TERMINAL ISLAND, CAL.

Mexico's Pacific Shrimp Freezing Plants

(Listed in geographical order, from north to south)

Firm and Location	Tons Daily Capacity	U. S. Importer
EL GOLFO, SONORA		
Productos Congelados de Santa Clara, S. A.	5	Marine Products Co.
PUNTA PENASCO, SONORA		
Compagnia Pesquera y Commercial, S. A.	....	Mel-Rox Sea Food Co.
MEXICALI, B. CFA.		
Productos Congelados de Mexicali, S. A.	....	A. R. Lantz & Co.
Productos Marinos San Felipe, S. A.	....	Wilbur-Ellis Co.
SAN FELIPE, B. CFA.		
Mexicana de Productos Oceanicos, S. A.	....	Fortuna Foods, Inc.
GUAYMAS, SONORA		
Cia de Productos Congelados, S. A.	20	Wilbur-Ellis Co.
Fomento Maritimo, S. A.	10	Closed
Productos Marinos de Guaymas, S. A.	16	Marine Products Co.
Hielera y Congeladora del Golfo de Cortez, S. A.	10	Leonard A. Dunegan & Co.
Pesquera E. Industrializadora de Guaymas, S. A.	10	Rubenstein & Sons
Pesquera E. Industrial del Pacifico, S. A.	5	Rubenstein & Sons
Congeladores de Productos en Alta Mar, S. A.	....	E. H. Gayou.
Mariscos Congeladora del de Guaymas, S. A.	15	Marine Products Co.
TOPOLOBAMPO, SINALOA		
Pesquera de Topolobampo, S de R. L.	50	Marine Products Co.
LA REFORMA, SINALOA	....	Closed
Cia de Productos Congelados, S. A.	....	R. M. Sloan & Co.
SANTA ROSALIA, B. CFA.		
"Mar Bermejo," S. A.	12	Chesbro, Robbins &
CULIACAN, SINALOA		
Refrigeradora de Culiacan	4	Graham, Inc.
		Penguin Frozen Foods
MAZATLAN, SINALOA		
Refrigeradora del Noroeste	16	Wilbur-Ellis Co.
Congeladora de Mazatlan, S. A.	25	Wilbur-Ellis Co.
Mariscos Tropicales, S. A.	3	Penguin Frozen Foods
Congeladora del Union, S. A.	7	Closed
Congeladora del Pacifico, S. A.	20	
TEPIC, NAYARIT		
Refrigeradora Nayarita, S. A.	3	
SALINA CRUZ, OAZOCA		
Refrigeradora de Salina Cruz	5	

of operating finances and declining catches, received some good news in late May when a completely new shrimp location, of high yield, was discovered on the west side of Lower California, north from Magdalena Bay to Abreojos Point, a distance of around 70 miles.

Practically all operators sent their trawler fleets, and in several cases their freezer vessels, around Cape San Lucas. It is believed nearly 2,000 tons of large shrimp were caught before the government closed the season July 31.

Facilities Are Increased

No new freezers were added to the plants down Mexico's west coast, although an ice-making plant, capable of producing 50 tons daily for use in the trawling fleet was operating out of Punta Penasco (Rocky Point), Sonora.

Plant was constructed for Productos y Heilo, S.A., Mario Fernandez, owner. Equipment consisted of two York, 100-hp. 12-cyl. compressors, driven by Model 12 Murphy diesel, 4-cyl., 132-hp., equipped with heat exchangers.

Six steel trawlers built at a Nova Scotia shipyard were delivered to Congeladora de Mazatlan, S.A. Mazatlan. These vessels, 58' by 16'6" are driven by 85-hp. Atlas diesels, turning 42 by 30 wheels. For auxiliaries the trawlers have Lister-Blackstone 6-hp. diesels.

The 65' former Albacore vessel *Miss California* was sold by George V. Castognola, Santa Barbara, to Productos Congelados, S.A., Guaymas.

Mexican Pacific shrimp operators elected to the Shrimp Association of the Americas in 1952 included, Jose Gutierrez, general manager, Pesquera de Topolobampo, S. de R. L., vice-president; Hector Ferreira, director, Pesquera E Industrializadora de Guaymas, S.A., secretary. Board members, in addition to Sn. Gutierrez and Ferreira, Nicolas Rodriguez, Mexicali.

During the 1951-52 season, shrimp shipped from Mazatlan amounted to 7,962,124 lbs. or 176 carloads, against 6,572,770 lbs. or 156 carloads. From Guaymas, for the 1951-52 season, 6,910,000 lbs., against 10,514,000 lbs. in the 1950-51 season.

Mexico Pacific Shrimp Exports to the West Coast

Through Arizona, San Diego, Los Angeles, San Francisco.

Year	Pounds
1934	677,742
1935	1,574,372
1936	553,045
1937	2,059,126
1938	3,243,418
1939	3,797,945
1940	4,913,474
1941	3,116,518
1942	4,420,136
1943	5,864,624
1944	6,082,651
1945	7,875,367
1946	11,491,660
1947	11,223,059
1948	14,441,622
1949	17,916,019
1950	24,380,095
1951	26,783,285
*1952	20,000,000

*Estimated

1952 Fall Operations Partially Restricted

With the opening of the new season, Aug. 15 for bays and Oct. 1 for open water, several freezing plants did not begin operations. Gen. Perez Ramos was reported to have closed his Fomento Maritimo plant at Guaymas and moved his fleet to Mazatlan.

Some changes in U.S. importers for various Mexican companies were noted. Pesquera E Industrializadora de Guaymas and associate companies tied in with Rubenstein & Sons Produce Company, Dallas, for distribution.

Productos Marinos de Guaymas went back to Marine Products; A. R. Lantz & Co., effected an arrangement with Productos Congelados de Mexicali; production of Mexicana de Productos Oceanicos, S.A. San Felipe is going to Fortuna Foods, Inc. R. M. Sloan & Company, Los Angeles, is sharing production from "Mar Ber-

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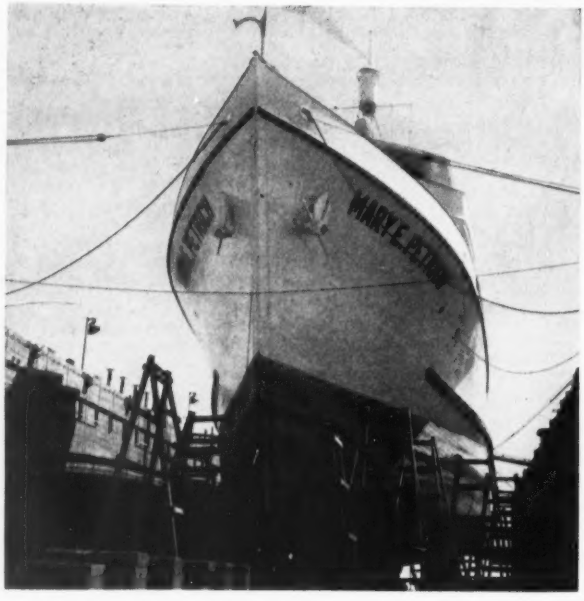

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of all sizes.

Fishing Boats are not built too big for this yard to haul!

We have drydocked practically all major Tuna Clippers on our

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Fishing boats do grow old and need bringing up to date as to HULL, MACHINERY or REFRIGERATION.

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EIGHT MARINE RAILWAYS

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TIDE WATER ASSOCIATED MARINE

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OAKLEY J. HALL
PRESIDENT

WAYNE JOHNSON
MANAGER

MEXICAN SHRIMP EXPORTS THROUGH CALIFORNIA AND ARIZONA

1950-51				1951-52			
MONTH	Fresh Pounds	Frozen Pounds	Total Pounds	MONTH	Fresh Pounds	Frozen Pounds	Total Pounds
August, '50	*	118,652	118,652	August, '51	*	23,900	23,900
September	*	588,946	588,946	September	400	479,250	479,650
October	*	2,489,459	2,489,459	October	708,807	3,874,239	4,583,046
November	*	5,580,281	5,580,281	November	605,256	4,006,146	4,611,402
December	*	3,652,095	3,652,095	December	313,604	3,321,431	3,635,035
January, '51	361,322	2,553,571	2,914,893	January, '52	128,019	2,170,467	2,298,486
February	122,857	2,483,307	2,606,164	February	92,774	1,806,933	1,899,707
March	48,647	1,526,140	1,574,787	March	232,900	918,850	1,151,750
April	240,371	2,311,703	2,553,074	April	50,728	620,522	671,250
May	119,521	1,765,483	1,885,004	May	30,896	1,625,715	1,656,611
June	10,025	1,098,176	1,108,201	June	18,831	1,488,875	1,507,706
July	1,000	394,551	395,531	July	7,435	1,363,735	1,371,170
	903,743	24,562,364	25,661,107		2,189,650	21,700,063	23,259,713

*Included with frozen.

mejo", Santa Rosalia, with Chesbro, Robbins & Graham, Inc.

Wilbur-Ellis Company was taking shrimp from Productos Marinos San Felipe, Mexicali, B. Cfa., Productos Congelados, S.A., Guaymas, Congeladora del Union and Comgeladora del Pacifico, Mazatlan. Marine Products Company was receiving from Productos Comgelados de Santa Clara, El Golfo; Productos Marinos de Guaymas, Guaymas, Mariscos Congeladora de Guaymas, S.A., Guaymas; Pesquera de Topolobampo, S. de R.L., Topolobampo.

Marine Products Company launched on a shrimp-breading program with its "Ocean Garden" brand in 1952, producing at Buena Park, near Los Angeles. There the firm was also producing a "Pan-Ready" fried shrimp in 6 oz. packages. Breaded shrimp was put out in 10 oz. size.

Fortuna Foods was producing its "Lolita" brand of breaded shrimp at Dallas, using Mexican Pacific sea food. "Blue Diamond" brand of breaded shrimp of Central Fish & Oyster Company, Los Angeles, was expanded in its distribution throughout the west last year, produced in consumer packages and 5 lb. cartons.

Sardine Scarcity Reaches Down Mexico's West Coast

MEXICO'S basic fish-canning industry, located largely in the northern end of Lower California, suffered throughout 1952 from shortage of the principal species: abalone, sardines and mackerel. Located about 75 miles from the international border at San Diego, there are seven canning plants, with a new abalone cannery going in at San Quentin, some 150 miles south, and a tuna-packing plant at Cape San Lucas, tip of the peninsula.

On Mexico's west side there are several shrimp canners, but no figures were available at year's end as to production. In view of poor yield of the shrimp fishery, the pack was believed to have been considerably short of 1951.

The principal producer of canned abalone, sardines and mackerel, Pesquera del Pacifico, S.A. was reported to have fallen far short of its 1951 production in all three species.

The region suffered from the same shortage in sardines as did its neighbor, California. However, while the California mackerel pack was one of history's highest, the Lower California production was off.

The abalone canning industry at Sauzel, Ensenada, Cedros Island and Turtle Bay did not go much beyond 65,000 cases—packed in 1-lb. whole, tall tins for Oriental consumption. This was about 50% of the previous year's production.

The abalone closed season was from Jan. 15 to March 15; then difficulties were experienced with adjustments of wages, etc., for the many diving teams. Too, the natural resource is dwindling with each passing year and the fishery extended.

World demand for canned abalone from Lower California, distribution handled by Marine Products Company, San Diego, is so great that the company cannot fill even 50% of the demand, according to L. K. Small, president of the concern.

When fishing is normal Pesquera del Pacifico and other Lower California firms ship considerable fish meal and oil to this country. The 1952 exports were practically none.

The sardine and mackerel pack for the Lower California was all for domestic consumption. Firms engaged in packing included, in addition to Pesquera del Pacifico, La Industrial de Ensenada, S.A., Pesquera Peninsula, S. de R. L. and Empacadora del Pacifico, S.A. and others.

Research fostered by California indicates that the principal spawning area for sardines is off the coast of Lower California; but that present scientific data indicates that no abundant year-class can be expected to enter the fishery soon.

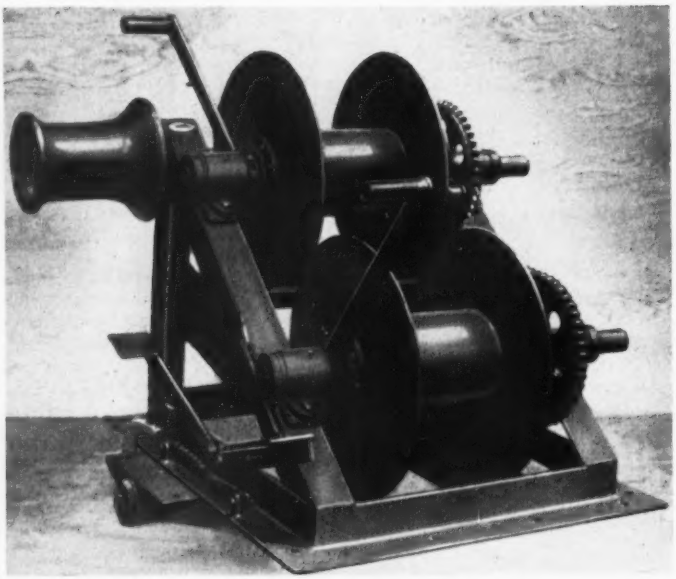
Improved catches are not expected for two or more years.

Lower California Fish Canneries

Company	Location	Products
Pesquera del Pacifico, S. de R. L. Francisco A. Morales, Jr., Gen. Mgr.	Sauzal	Sardines Mackerel Meal and Oil
Pesquera del Pacifico, S. de R. L. Luis Ojeda Mellson, Plant Mgr.	Cedros Island	Abalone
Cia. Maritima Industrial y Mercantil, S. de R. L. Francisco A. Morales, Jr., Gen. Mgr. Manuel Murillo, Plant Mgr.	Ensenada (Plant at Turtle Bay)	Abalone
La Industrial de Ensenada Victor Salazar, Gen. Mgr.	Ensenada	Mackerel Sardines
Pesquera Peninsular, S. de R. L. Roberto Rivas Cordova, Mgr.	Ensenada	Abalone Sardines Mackerel
Empacadora del Pacifico, S. A. Francisco Alvarez, Owner-Mgr.	Ensenada	Abalone Albacore
Empacadora de Baja California, S. de R. L. Ernesto Ruffo, Owner-Mgr.	Ensenada	Abalone Clams
Cia. Productos Marinos Romera Cabral Jimenez, Gen. Mgr.	Cape San Lucas	Tuna

DUAL DUTY

DOUBLE-DRUM SHRIMP TRAWLER WINCH



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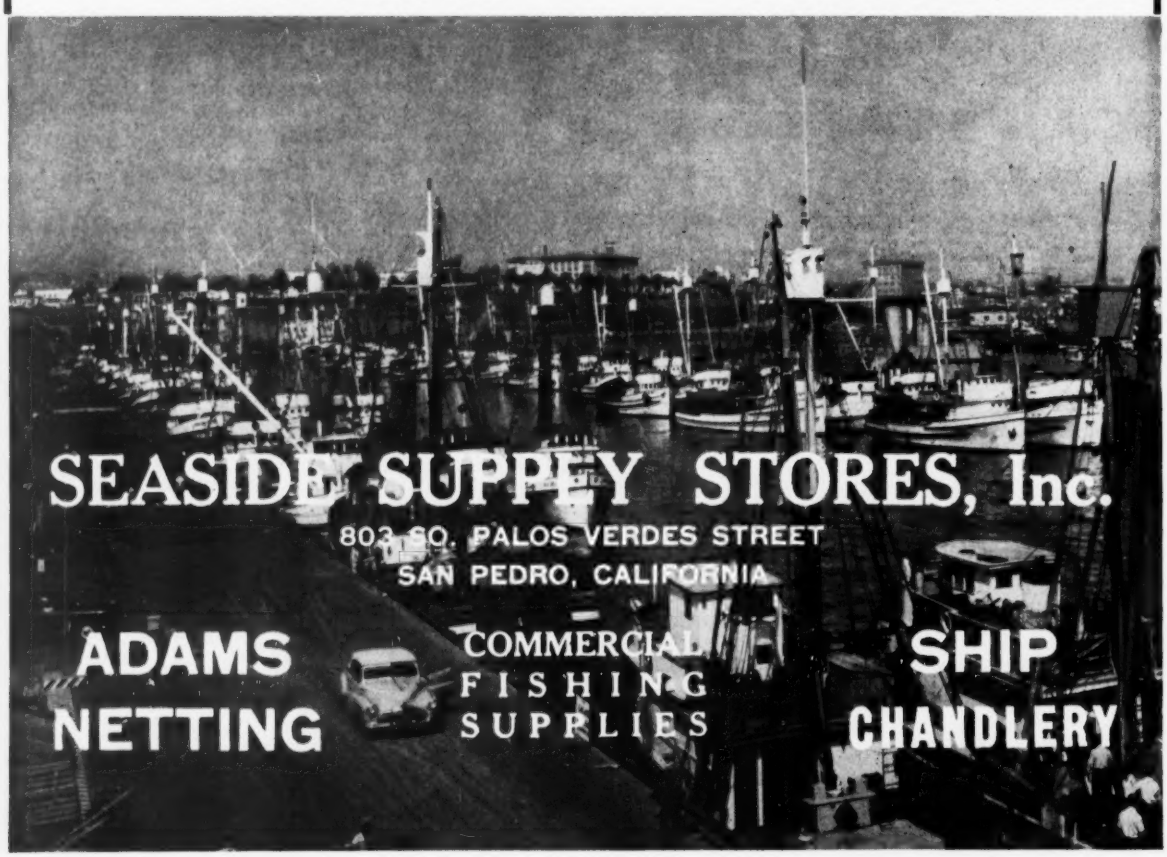


Mexico's Pacific Shrimp Freezer Vessels

Company	Vessel	Headquarters
Pesquera E Industrializadora de Guaymas, S. A.	*El Guaymense*	Guaymas, Sonora
Cia. de Productos Congelados, S. A.	*Mahoning*	Guaymas, Sonora
Congeladores de Productos En Alta Mar, S. A.	*Admiral Brenton*	Guaymas, Sonora
Fomento Maritimo, S. A.	*General Villa*	Guaymas, Sonora
Roger Debbaudt	*Santa Ines*	Guaymas, Sonora
Pesquera de Topolobampo, S. A.	*Tongorina*	Topolobampo, Sinaloa

Mexico's Fishery Exports To West Coast Show Drop

EXPORT of fish and fishery products from Mexico's Pacific fisheries, through U.S. Customs ports of entry in California and Arizona, to California, declined sharply in 1952 against the previous year. In fact, the decrease had been noted for several years.

Fresh and frozen shrimp, the backbone of Mexico's west coast fishery, declined from 25,000,000 lbs. in 1951 to no more than 20,000,000 lbs. Lack of operating finances and the fact that the Mexican government did not come to the aid of the industry, as it did in 1951 with a 5,000,000 pesos loan; coupled with smaller yields, were largely responsible for the decline.

Abalone, most of it canned in 1-lb. whole tall cans for Oriental consumption, did not quite reach 3,000,000 lbs. as against 4,262,594 lbs. in 1951. It is believed the total abalone pack for the peninsula did not exceed 65,000 cases.

Imports of clam meats, frozen, for processing into ½-lb. round cans, in Southern California showed a slight increase over the previous year: 387,500 lbs. to December 1, against 230,000 lbs. for all of 1951.

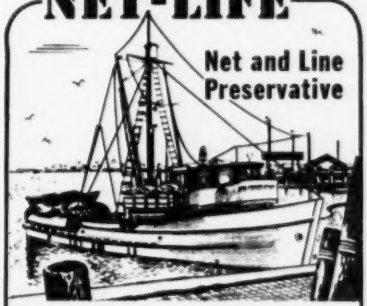
Spiny lobsters crossing into California cooked from Lower California camps reached 1,469,615 lbs. by December 1, this compared to 1,900,000 lbs. in 1951.

Totuava — Mexican sea bass — continued to lose ground, as it has for years. To December 1, 651,943 lbs. had come to Southern California markets, compared to 750,000 lbs. in 1951 and 1,285,479 lbs. in 1950.

Mexico's Pacific Shrimp Canneries

Cannery	Location	Brands
Pesquera E Industrializadora de Guaymas, S. A.	Guaymas, Sonora	"Ferreira"
Pesquera de Topolobampo, S. de R. L.	Topolobampo, Sin.	"Guaymex"
Empacadora de Conservas de Los Mochis, S. A.	Los Mochis, Sin.	"El Fuente"
Empacadora Calidad, S. A.	Cullican, Sin.	"Calidad"
Empacadora de Escuinapa, S. A.	Escuinapa, Sin.	"Belmar"
		"Excelsior"
		"Myrsa"
Cia. de Productos Congelados, S. A.	Guaymas, Sonora	"Cima"

NET-LIFE
Net and Line Preservative



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PUGET SOUND SCALLOPS
DUNGENESS CRABMEAT
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CRAB

Crab canning on the Pacific Coast dropped to 42,986 cases in 1952, smallest seasonal total since 1945. Moreover, the total included 9,028 cases of King crab, with Dungeness or Pacific crab pack limited to 33,958 cases.

Factors producing the decline were several: persistent scarcity of crabs on the Washington coast; diversion of increased quantities to packaged frozen products—crabs in the shell as well as picked crabmeat; and the influence of imports.

ALASKA stood-out as the dominant district of the Pacific Coast crab fishery of 1952—for both King and Pacific or Dungeness crabs. The northern territory outranked all other areas in significance of production—and perhaps in overall volume of catch as well, although the lack of a fresh market for Alaskan crabs, and the substantial part of the production from other areas going into this trade makes direct comparisons difficult.

S. E. Alaska Crab Operations Productive

The dearth of crabs which has plagued Pacific Northwest operators for several years—particularly on the Washington coast—directed attention to Southeast Alaska in 1951, and in 1952 the fleet operating out of Ketchikan found excellent fishing in the Dixon Entrance waters. Heavy catches were made for a time during the early summer, yielding very satisfactory business.

The success of the Americans in Dixon Entrance and Hecate Strait also has stimulated the Canadians in the Queen Charlotte Islands and along the northern British Columbia mainland, with the result that there was a substantial step-up in crabbing in that region during 1952.

This may be expected to show further growth in the future as the Canadians are nicely placed to participate in the American market for frozen crabmeat.

Northern California operations, and also those in extreme southern Oregon, were quite good during 1952. At Port Orford in particular good fishing and excellent crabs were reported again, continuing a trend first manifest several years ago.

Bering Sea King Crabbing Curtailed

American King crab operators were keenly disappointed early in 1952 when the Tripartite Treaty with Canada and Japan did not impose any limitation upon King crab operations in Bering Sea by the Japanese.

1952-PACIFIC CANNED CRAB-1952

COMPANY	Cannery Location	Cases 48 Halves Flats
WASHINGTON		
Chinook Packing Co.	Chinook	290
Kaakinen Fish Co.	Westport	831
Nelson Crab & Oyster Co.	Tokeland	4,200
Pacific Pearl Seafoods	Westport	1,746
Whiz Fish Products Co.	Hoquiam	200
Miscellaneous	- - - -	55
TOTAL WASHINGTON		7,322
OREGON		
Columbia River Packers Association	Astoria	4,359
Point Adams Packing Co.	Hammond	1,995
Port Orford Fish Co.	Port Orford	2,346
Yaquina Bay Fish Co.	Newport	1,633
TOTAL OREGON		10,333

COMPANY	Cannery Location	Cases 48 Halves Flats
ALASKA		
Coastal Glacier Seafoods, Inc.	Hoonah	3,000
Halferty Canneries, Inc.	Cordova	655
Island Seafoods Co.	Kodiak	2,563**
Ivanoff Bay Packing Co.	Ivanoff Bay	2,465**
Nordic Maid Co.	Bering Sea	4,000**
Parks Co., H. M.,	Cordova	869
Pacific Pearl of Alaska	Ketchican	10,323
Thompson Co., N. E.,	Kake	1,200
TOTAL ALASKA		25,075
CALIFORNIA		
Tom Lazio Fish Co.	Eureka	311
TOTAL DUNGENESS CRAB		34,013
TOTAL KING CRAB		9,028
GRAND TOTAL, ALL CRAB		43,041

** King Crab. NOTE: — All cases have been counted on the basis of 48 halves, but no attempt has been made to distinguish between cases of the two kinds of halves in which the pack was put-up — "standard" and "tuna-size".

OYSTERS

PACIFIC CANNED OYSTERS
Season of 1951-52

COMPANY	CANNERY LOCATION	(Cases 48) No.1 E.O. 10 oz	Buffet 7¼ oz.*	No.1 Tall	Total Cases as they run.	Total Standard Cases, Basis 48 No.1 E.O.
Bendiksen Co., E. H.	South Bend, Wash.	19,960	27,996	...	47,946	42,350
Coast Oyster Co.	South Bend, Wash.	25,466	17,499	3,699	46,664	45,383
Northern Oyster Co.	Oysterville, Wash.	1,250	1,000	210	2,460	2,386
Union Fishermen's Cooperative Pkg. Co.	Astoria, Ore.	1,248	2,326	...	3,574	3,109
Sherwood Co. **	Aberdeen, Wash.	...	...	...	...	...
Wiegardt Bros. *	Ocean Park, Wash.	13,690	2,697	...	16,387	15,848
TOTALS		61,604	51,518	3,909	117,031	109,076

PACIFIC CANNED OYSTERS, equivalent of standard cases of 48 No. 1 E. O. packed in --

1951	132,140						
1950	120,742	1945	3,184	1940	146,870	1935	88,062
1949	113,989	1944	none	1939	112,549	1934	68,323
1948	83,489	1943	583	1938	111,348	1933	32,315
1947	57,205	1942	72,315	1937	110,872	1932	12,233
1946	89,050	1941	178,445	1936	118,853	1931	7,930

NOTE: -- Figures for current production cover 1951-52 oyster season. Historical figures are for calendar years and have been corrected from official sources.

* Also packed 980 cases Oyster Soup and 521 cases Smoked Oysters.
**Packed 2,000 cases Oyster Soup, not included in totals.

While the government of Japan in 1952 prohibited its nationals from engaging in the Bering Sea crab fishing, it is not anticipated that this limitation will be continued; and 1953 can be expected to see the Japanese floating canneries once again active on this crab grounds off the Alaskan coast.

The year 1952 saw a swing away from King crab freezing in Bering Sea. Two vessels which have followed this trade for a number of years—*Chirikof* and *Reefer King*—did not enter the 1952 King crab fishery at all. Another—*Nordic Maid*—installed a small cannery aboard and limited her operations almost exclusively to canning.

However, the steel trawler *Deep Sea*, operated by Wakefield's Deep Sea Trawlers, Inc., the principal exponent of King crab freezing, continued its operations in that field through 1952, with excellent production.

The trawler *Nordic Maid* worked as a combined fishing vessel and packing plant, canning its crab as it fished them, and put up a moderate pack.

OYSTER canning on the Pacific Coast maintained a steady pace in 1952, although volume of production was slightly below that of the year previous.

There was a notable tendency during the year to increase the volume of oyster stew canned; and the development of frozen breaded and frozen fried oysters served to reduce the volume of the canned pack somewhat by diverting oysters from the cannery to the package freezing department.

Plantings of imported oyster seeds in 1952 were exceptionally heavy, and the orders at presstime of this *Yearbook* indicated that 1953 seeding would be almost as heavy.

Pacific oyster canning tended to concentrate in the hands of a few well-established concerns.

The buffet tin became even more fully established in Pacific oyster canning in 1952, although the No. 1 E.O. can was still the dominant package.

Washington Crab Landings

YEAR	Puget Sound Pounds*	Grays Harbor Pounds**	Willapa Harbor Pounds**	Columbia River Pounds**	TOTAL POUNDS
1936	441,892	451,890	865,194	.....	1,758,976
1937	500,104	643,234	1,441,352	3,428	2,588,118
1938	521,180	387,728	1,831,716	.....	2,740,624
1939	441,122	620,004	2,153,496	.....	3,214,622
1940	428,692	1,134,182	3,341,754	.....	4,904,628
1941	514,184	1,293,272	3,968,152	206,984	5,982,542
1942	989,186	2,262,696	2,134,816	249,304	5,636,004
1943	1,267,024	2,732,090	1,052,550	56,660	5,108,324
1944	1,790,118	2,622,316	1,529,196	83,326	6,024,956
1945	1,993,398	1,961,978	1,439,204	4,838	5,399,418
1946	2,284,810	3,674,536	2,022,004	121,335	8,102,685
1947	1,512,808	6,599,380	3,822,288	38,184	11,972,660
1948	1,933,426	9,080,584	4,241,256	614,184	15,869,450
1949	1,355,148	7,633,157	3,204,240	950,006	13,142,551
1950	2,373,316	2,171,072	1,427,042	399,440	6,371,166
1951	1,547,502	1,321,400	1,806,096	154,970	4,829,968
1952	1,097,682	1,366,891	1,842,694	90,856	4,398,123

*Conversion: 22 lbs. per doz. ** Conversion: 24 lbs. per doz.
NOTE: -- 1952 Puget Sound figures are incomplete but include best available estimates to Dec. 31, 1952.

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EAST POINT CANNED OYSTERS
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CLAMS

Paradoxically, Pacific razor clam canning benefitted from the indifferent results of the crab fishing and packing business on the Pacific Northwest coast in 1952.

Poor crab fishing out of Washington coast ports reduced the demand for crab bait to the point but few clams were diverted from canning for that purpose.

CLAM canning operations of the North Pacific coast, although continuing relatively limited and closely concentrated, were on a somewhat freer order in 1952 than for many years.

This was particularly true of the Washington coast razor clam business, which has been handicapped almost to the point of destruction in some recent years by the insatiable demand for fresh razor clams for crab bait.

The series of poor crab fishing years continuing on the Washington coast, combined with a substantial carryover of frozen razor clams put up for bait purposes in 1951, served to limit the diversion of the clams from the canneries to the crab bait buyers.

In the Copper River district of Central Alaska the pack of razor clams continued on a normal scale, the pack quota for the year being filled. However, operations were very closely concentrated, due to the operator's conservative preparations in anticipating of a poor salmon run. Most of the pack was put up in a single cannery.

Pacific clam canners — razor and hardshell alike—have been face to face with specially severe competition in recent seasons. The imports of Oriental clams have proven damaging to the business of Pacific packers of hardshell clams; while the Atlantic coast canners of sea clams have made substantial inroads on the markets formerly suppled almost entirely by the razor clam producers.

1952-PACIFIC CANNED CLAM PACK-1952

Company	Cannery Location	RAZOR CLAMS 1-lb. Talls, 48s.	No.1 E.O., 48s.	½-lb.Flats, 48s.	No.10, 6s.	TOTAL CASES
Alaska						
Big Point Seafood Co.	Cordova	...	...	500	...	500
Aurora Packing Co.	Cordova	...	...	1,500	...	1,500
Halferty Canneries, Inc.	Cordova	...	...	27,946	...	27,946
Tapley Packing Co.	Cordova	...	...	1,000	...	1,000
TOTAL ALASKA		...	...	30,946	...	30,946
Washington						
Mohawk Packing Co.	Moclips	...	...	2,503	...	2,503
Paragon Packing Co.	Hoquiam	...	...	...	...	...
Plumb and Edney	Copalis	...	...	1,715	...	1,715
Pioneer Canneries, Inc.	Aberdeen	...	...	7,195	...	7,195
Strand Fisheries	Hoquiam	...	...	363	...	363
TOTAL WASHINGTON		...	...	11,776	...	11,776
TOTAL AMERICAN RAZOR CLAMS		...	...	42,722	...	42,722
British Columbia						
Massett Cooperative Assn.	Massett	...	...	3,418	...	3,418
GRAND TOTAL RAZOR CLAMS		...	...	46,140	...	46,140
		HARDSHELL CLAMS				
Bugge Canning Co.*	Sequim, Wash.	488	...	535	350	1,373
Guilford Canning Co.**	Port Townsend	3,158	...	5,308	458	8,924
Iwersen Canning Co.***	Point Roberts	434	2,730	...	68	3,232
TOTAL HARDSHELL CLAMS		4,080	2,730	5,843	876	13,529

* Also 500 cases #10 calm nectar, 254 cases 8 0z. clam nectar, 44 cases qt. clam nectar.

** Also packed 2,933 cases of clam nectar, 197 cases of clam chowder, and 61 cases of clams canned in the shell.

*** Also 1,023 cases #10 cans clam nectar.

OREGON CLAM LANDINGS

YEAR	Pounds Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	10,481	23,314	53,499	29,843	29,458	57,569	67,578	34,961	21,768	12,505	9,341	10,822	361,139
1946	12,150	30,471	61,310	33,600	44,313	67,755	41,399	31,983	21,130	8,883	18,237	12,519	383,750
1947	26,936	33,572	47,126	31,537	58,325	38,980	66,384	33,868	13,353	3,201	12,533	3,199	369,014
1948	19,953	15,875	33,408	38,856	61,816	50,750	55,484	40,914	15,631	11,211	5,518	6,473	355,889
1949	12,859	5,924	23,428	29,333	70,451	38,844	36,599	29,888	13,678	41,825	28,866	5,846	337,541
1950	9,204	15,981	19,317	31,079	78,537	107,309	45,183	52,794	36,306	33,708	37,564	13,747	480,729
1951	6,929	16,749	34,942	41,729	60,359	72,691	80,390	36,295	19,016	...	...	...	369,100
1952	8,320	24,363	30,038	45,623	91,761	65,599	69,742	29,653	18,272	34,317	...	...	417,688

PACIFIC CANNED CRAB

(Shown in Standard Cases of 48 Half-pound Cans)

Year	Alaska	Washington	Oregon	California	American Total		British Columbia	North American Total	Year
					Cases	Value			
1952	25,075	7,322	10,333	311	43,041	$1,121,165	*	43,041	1952
1951	26,753	19,885	39,878	1,500	88,016	2,332,424	*	88,016	1951
1950	25,927	23,270	28,075	1,260	78,532	1,868,680	7,283	85,815	1950
1949	13,198	65,004	36,652	...	114,854	2,547,765	4,839	119,693	1949
1948	26,076	104,362	56,982	3,500	187,420	4,264,622	3,500	190,920	1948
1947	10,158	54,756	34,582	6,624	106,120	2,037,904	2,481	108,601	1947
1946	15,792	19,263	29,106	15,194	79,356	2,271,965	1,455	80,811	1946
1945	15,760	9,070	896	...	25,726	398,898	...	25,726	1945
1944	13,376	16,524	10,968	...	40,868	653,888	385	41,253	1944
1943	9,386	18,332	20,874	...	48,592	782,173	...	48,592	1943
1942	7,766	26,052	45,338	...	79,156	1,266,496	885	80,041	1942
1941	11,126	13,232	13,346	...	37,704	311,822	3,386	41,090	1941
1940	12,828	8,634	3,792	...	25,254	178,021	3,794	29,048	1940
1939	11,978	2,716	8,406	...	23,100	184,254	2,049	25,149	1939
1938	...	...	...	...	27,016	258,375	2,157	29,173	1938
1937	...	...	...	...	27,394	269,699	1,546	28,940	1937
1936	...	...	...	...	14,758	124,925	...	14,758	1936
1935	...	...	...	...	13,840	106,832	...	13,840	1935
1934	...	...	...	...	22,869	184,052	...	22,869	1934
1933	...	...	...	...	17,564	134,330	...	17,564	1933
1932	...	...	...	...	9,314	73,112	...	9,314	1932
1931	...	...	...	...	263	2,104	...	263	1931

*Not Available.

PACIFIC CLAM PACK IN PREVIOUS YEARS

Year	(Basis 48 halves per cases) RAZOR CLAMS				Year	(Basis 48 halves per case) HARD SHELL CLAMS			
	Alaska	Wash.& Oregon	B.C.	TOTAL		Alaska	Wash.	*B.C.	TOTAL
1929	28,270	63,526	13,050	104,846	1929	....	19,514	21,547	41,061
1930	33,937	54,746	12,623	100,324	1930	600	27,735	18,738	46,073
1931	43,460	53,412	8,658	105,440	1931	2,600	19,516	18,043	40,159
1932	69,147	46,002	8,457	123,606	1932	76	13,264	9,201	22,541
1933	38,213	38,772	....	76,985	1933	....	22,438	20,432	45,163
1934	31,655	30,232	....	61,656	1934	....	25,880	11,630	37,510
1935	34,864	53,057	....	87,921	1935	....	37,249	20,418	57,667
1936	29,900	49,692	....	79,592	1936	....	45,222	25,158	70,380
1937	29,044	20,373	....	49,417	1937	....	45,788	25,174	70,962
1938	42,305	64,167	....	106,472	1938	....	40,007	44,310	84,317
1939	35,258	60,205	....	95,463	1939	....	39,165	10,862	50,027
1940	41,556	51,705	....	93,261	1940	....	35,250	7,151	42,402
1941	22,736	27,629	....	50,365	1941	....	22,380	6,772	29,152
1942	46,703	3,999	5,568	56,270	1942	....	10,972	12,240	23,212
1943	48,692	1,732	5,821	56,275	1943	2,457	2,902	11,642	†34,001
1944	47,050	3,512	**	50,562	1944	11,630	19,863	**	†71,024
1945	43,476	38,152	**	81,628	1945	6,029	11,752	4,693	22,474
1946	51,594	51,063	**	102,657	1946	14,441	20,574	23,867	98,826
1947	24,726	42,970	....	67,696	1947	323	15,301	**	15,624
1948	34,425	11,720	....	46,145	1948	92	12,600	....	12,692
1949	42,103	4,482	923	47,518	1949	125	16,449	9,794 ½	26,368 ½
1950	54,534	849	1,583	56,966	1950	....	8,919	8,456	17,375
1951	44,082	11,014	3,196	58,292	1951	15	13,981	....	13,996
1952	30,946	11,776	3,418	46,140	1952	...	13,529	....	13,529

*Bristish Columbia figures for years 1932 to 1947 include some razor clams. ** British Columbia totals not available.
†Total includes clams canned in California from clam meats produced in Mexico, 17,000 cases in 1943, 39,531 cases in 1944, and 225,299 cases in 1945, and 39,944 cases canned in California in 1946.

WASHINGTON RAZOR CLAM PRODUCTION

YEAR	COPALIS BEACH (Pounds)			GRAYLAND BEACH (Pounds)			LONG BEACH (Pounds)			KALALOCK, etc.	Total Catch All Beaches (Pounds)
	# of Digs	Total Catch	Per Dig	#of Digs	Total Catch	Per Dig	# of Digs	Total Catch	Per Dig	Total Catch-Pounds	
1937	20,695	546,486	26.4	9,026	285,317	31.6	2,986	99,591	33.4	46,478	997,872
1938	37,064	1,366,441	36.9	20,765	882,619	42.5	9,410	364,383	38.7	44,670	2,650,355
1939	23,903	846,633	35.4	11,182	433,796	38.7	11,321	653,992	57.7	30,692	1,965,113
1940	25,343	604,338	23.8	13,582	347,435	25.5	25,115	1,159,123	46.1	14,886	2,125,782
1941	12,389	406,393	32.8	2,643	111,819	42.3	3,307	222,129	67.2	806	741,147
Reserve	7,965	347,693	43.7	———	———	———	———	———	———	———	———
1942	5,088	143,148	28.1	814	26,283	32.3	3,941	174,104	44.2	*	343,535
1943	5,284	164,907	31.2	1,005	24,728	24.1	799	20,627	25.8	*	210,262
1944	8,485	409,374	48.2	2,705	105,425	38.9	2,651	108,030	40.7	*	622,829
1945	14,519	1,124,965	77.5	5,289	512,298	96.9	4,255	418,673	98.4	1,235	2,057,171
1946	12,387	922,516	74.5	10,548	461,773	43.8	11,109	663,776	59.8	*	2,048,065
1947	16,681	1,164,321	58.5	6,564	305,122	46.5	9,105	544,657	59.7	*	2,014,100
1948	18,263	687,612	37.6	6,642	249,869	37.6	8,489	268,862	31.8	50,350	1,256,693
1949	14,496	475,649	32.8	5,412	177,227	32.7	1,220	42,169	34.5	26,686	721,731
1950	11,878	231,879	26.9	———	———	———	———	———	———	5,303	237,182
1951	14,583	700,173	48.0	———	———	———	———	———	———	———	700,173
1952	17,630	651,733	37.0	———	———	———	———	———	———	———	691,328**

* The small amount dug is included with Copalis Beach. ** Total includes 39,595 pounds dug on the Quinault Reservation.
NOTE: — In 1950 the catch per dig was computed only on pounds sold, which equaled 5,205 digs for 140,017 pounds. 91,862 pounds of the quota were not sold and the number of digs for this unsold portion does not agree with the digs and pounds sold.

EXPLORING
Deeps – Distances – Markets

Explorations of 1952 lead the Pacific fisheries into fields of entrancing possibilities in mid-ocean, and at enormous depths;

Venturous fishermen prove rich resources on the high seas from the sub-Arctic to the Equator; and

Pioneering packers test the markets with new products, new packages, new methods.

DEVELOPMENTS in the fisheries, operational, technical and market-wise, proliferated in 1952; and some were of importance which may be expected to shape the future of the fisheries of the Pacific for generations to come.

One of the most significant of these advances was the success of the Japanese in taking salmon by means of drift gillnets fish in the North Pacific to the westward of 175° West Longitude, the meridian running through Adak Island.

The fish taken were primarily Reds and Chums. The numbers secured were evidently entirely gratifying to the Japanese, who were fishing outside the treaty waters from which Japan abstains under the Tripartite Treaty.

Explorations Test Great Depths and Distances

Exploration of another form and in other waters carried Pacific trawling down to depths greater than 500 fathoms. While these depths, trawled by the U. S. Fish and Wildlife Service exploratory vessel *John N. Cobb*, were fished on an exploratory basis, com-

Pacific Ocean perch, only recently exploited by Pacific fishermen and operators, provide a resource of enormous extent and opportunity — providing the fillets can be produced at a cost which will enable the Pacific industry to compete with products of the North Atlantic trawler fleet and imported fillets from other countries.

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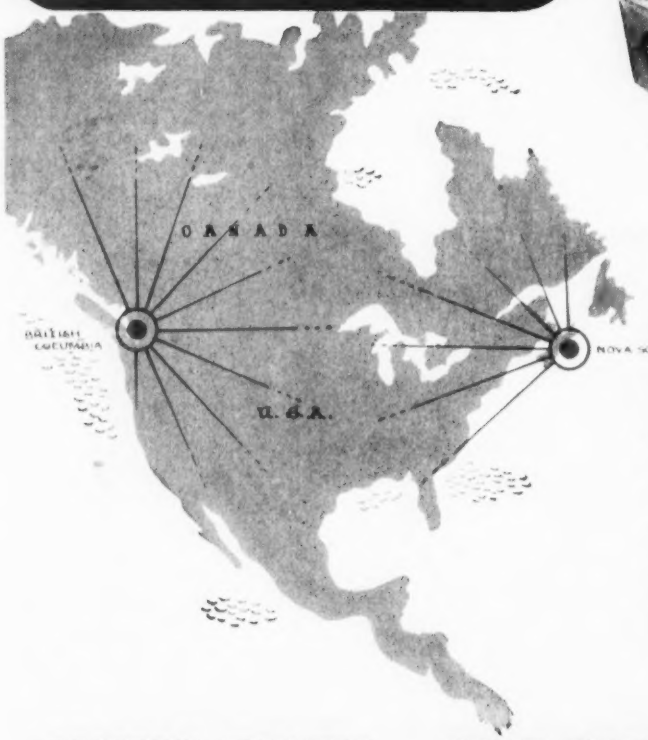
The favorite across the Continent



Haddock, Cod and Ocean Perch caught in the North Atlantic and packed in Nova Scotia—Salmon, Sole, Halibut and others from the Pacific, fresh caught, cleaned, filleted and packed in British Columbia . . . these choice fish are favorites everywhere.

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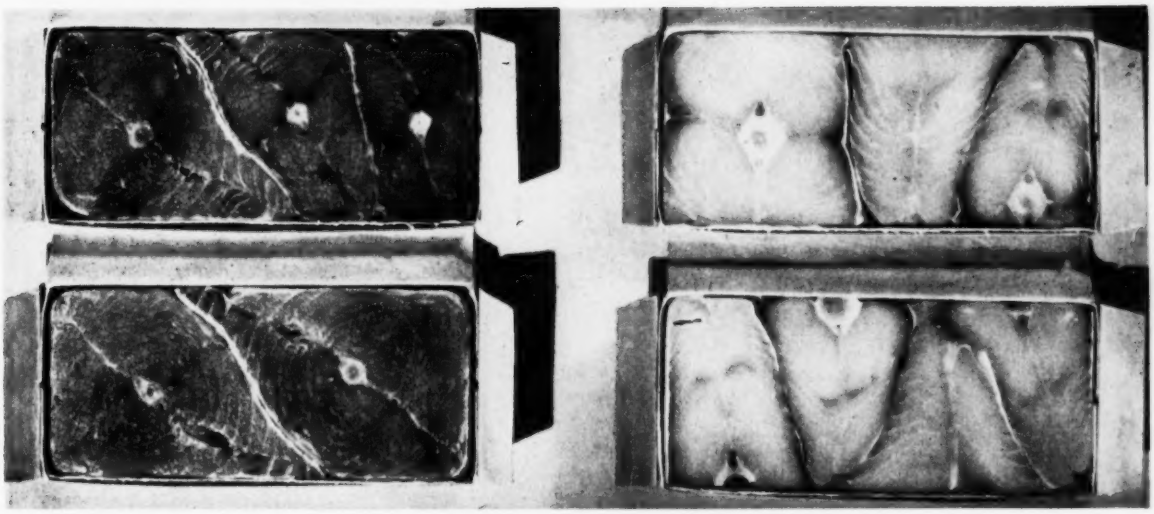


One of the product innovations of 1952—salmon and halibut steaks machine-sliced from unfrozen fish by New England Fish Co., packed in exact-weight cartons and pressure-frozen. Packages pictured were photographed after thawing.

mercial draggers of the Pacific Coast have approached them in the course of their fishing, particularly for Pacific Ocean perch and Dover sole.

Opportunities of flag-line fishing at sub-surface levels in Equatorial waters were demonstrated in 1952 by vessels operated by the Pacific Oceanic Fishery Investigations. This agency's researches demonstrated the existence of a large population of tuna in a band paralleling the Equator on the north; and late in 1952 the commercial fisherman *Cavallieri*, fishing under charter to P.O.F.I., took a capacity load by means of flag-line gear. Fishing in the waters in question has been found to yield at a rate from three to 10 times that at which the Japanese maintained an economically profitable fishery much further to the West.

Commercial exploitation of the fisheries for Pacific Ocean perch and the newly-discovered small shrimp of Pacific waters began in earnest in 1952. The shrimp fishery attained only small stature during the year, but grew steadily and eventually may provide a contribution of importance to the Pacific fishery economy. Morro Bay in 1952 was the center of this fishery, which has been explored and proven north as far as the Columbia River.

Pacific Ocean perch development advanced substantially in the year, although handicapped by the price of raw fish, which must compete for markets with the product of the North Atlantic fishery centering at Gloucester.

King crab operations in Alaskan waters—Being Sea and in the neighborhood of Kodiak Island — veered away from the practice of frozen packaging in 1952 and turned toward canning. Only one operation—that of the *Deep Sea* — continued to pack frozen King crab meat in quantity.

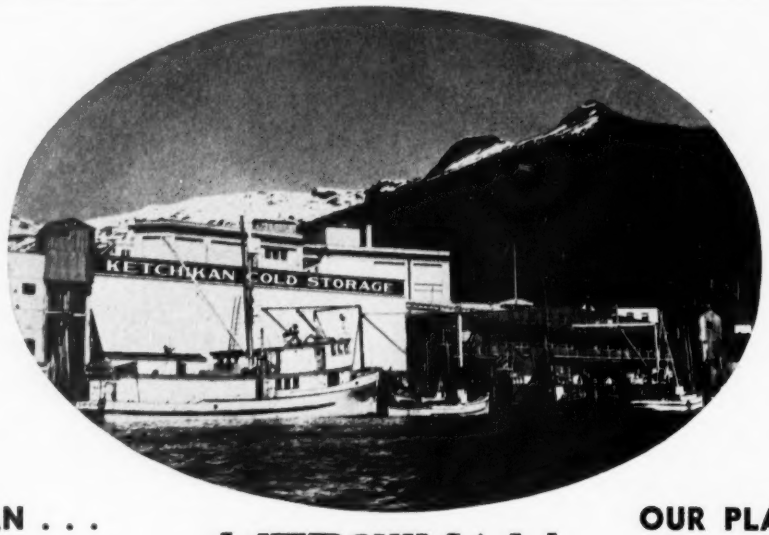
Salmon was packed in glass on a market-test basis in 1952, the Friday Harbor Canning Co. putting up a modest pack of Puget Sound Sockeye in this manner. The glass containers used were meant to be displayed inverted, with the bottom of the glass upward for greater visibility and product display.

Breaded oysters and frozen fried oysters were new products of the Pacific fisheries offered for sale first in 1952. They were reported to have won satisfactory initial consumer acceptance. Initial operations in this field were those of Willapoint Oysters, Inc., South Bend, Wash.

The field of product development in 1952 was featured by the introduction of knife-cut steaks of salmon, halibut and sablefish sliced from unfrozen fish and introduced in the fall of 1952 by the New England Fish Co. and the Columbia River Packers Association.

These steaks were pressure-frozen in exact-weight consumer packages. As they were frozen in the packages under pressure, the steaks were formed to the package and air excluded, giving a firm, tight package reducing deterioration in storage.

Frozen King crab legs, cut to carton size and sawed lengthwise, and offered in a window package were among the new items introduced in 1952.



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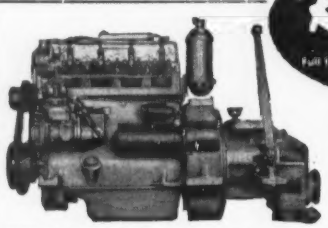

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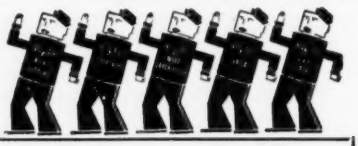

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- **STAY-TITE DECK SEAM SEALER.** Pliable.
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HALIBUT

Halibut production in 1952 exceeded that of any year since 1915 and wrote a new testimonial to the success of the international halibut restoration enterprise in which the United States and Canada have been engaged jointly since 1924.

The gain of nearly 6 million pounds over 1951 reflected increased abundance of the population on the "local" banks, and application of the new "split-season" policy of the International Fisheries Commission.

INCREASED abundance of halibut on the banks—particularly those off British Columbia and Southeast Alaska—plus application of a plan for cropping parts of the stock at the periods when they peak, in 1952 produced a North Pacific halibut catch of nearly 62 million pounds.

When the International Fisheries Commission was discussing its plan for special or "split-seasons", designed to take the catch of certain banks at late periods when they were most heavily populated, the industry was told that it could expect an increase in catch of around 5 million pounds as result of the application of such a program.

With the "split-season" program applied in three sub-areas, *the 1952 halibut catch exceeded by 6 million pounds the average of the five preceding years,* including 1951, when special seasons prevailed in two areas.

The special seasons for sub-areas did not account for the entire increase, that is true. As a matter of fact, the south Hecate sub-area actually decreased in yield from 1951. This drop was just about offset by the rise in take from the Forrester Island ground.

The new sub-area to Westward yielded nearly 1 million pounds extra, and a quarter million additional came from Bering Sea.

Split-Seasons Alter Former Landing Patterns

Both fleets shared in the increased catch, but Canada continued the rising trend manifest for many years—with a few brief reversals—which has seen the Canadian fleet's percentage of the

Pacific Halibut Catch by Areas and Nationalities

YEAR	Pounds										YEAR
	AREA 1	AREA 2†			AREA 3†			TOTAL American	TOTAL Canadian	GRAND TOTAL	
	American	American	Canadian	Total	American	Canadian	Total				
1932	902,271	16,026,631	5,960,640	21,987,271	21,146,037	451,761	21,597,798	38,074,939	6,412,401	44,487,340	1932
1933	722,254	14,880,259	7,649,400	22,529,659	22,887,941	637,672	23,525,013	38,490,454	8,286,472	46,776,926	1933
1934	1,541,258	13,360,103	9,004,714	22,364,817	22,829,989	726,658	23,556,648	37,731,350	9,731,372	47,462,722	1934
1935	*1,489,294	13,112,709	8,954,740	22,067,449	22,532,977	1,251,314	23,784,291	37,134,980	10,206,054	47,341,034	1935
1936	708,301	13,865,731	8,696,865	22,562,596	23,717,665	1,887,788	25,605,453	38,291,697	10,584,653	48,876,350	1936
1937	709,752	13,445,575	9,852,348	23,297,923	23,551,917	1,912,966	25,464,883	37,707,244	11,765,314	49,472,558	1937
1938	706,316	13,737,819	9,571,461	23,309,280	22,820,005	2,623,208	25,443,213	37,264,140	12,194,669	49,458,809	1938
1939	1,072,675	13,466,002	10,913,035	24,379,037	22,761,120	2,552,125	25,313,245	37,299,797	13,465,160	50,764,957	1939
1940	779,036	14,395,547	11,101,558	25,497,105	25,396,243	1,582,314	26,978,557	40,570,826	12,683,872	53,254,698	1940
1941	332,259	13,332,247	10,609,166	23,941,413	25,590,281	2,350,333	27,940,614	39,254,787	12,959,499	52,214,286	1941
1942	285,621	14,046,982	9,147,146	23,194,128	24,903,636	2,054,745	26,958,381	39,236,239	11,201,891	50,438,130	1942
1943	419,944	13,740,543	11,116,583	24,857,126	26,569,949	1,790,540	28,360,489	40,730,436	12,907,123	53,637,559	1943
1944	318,689	14,957,704	11,149,714	26,107,418	24,782,581	2,190,459	26,973,040	40,058,974	13,340,173	53,399,147	1944
1945	529,000	13,230,000	11,750,000	24,980,000	25,605,000	3,551,000	29,156,000	39,364,000	15,301,000	54,665,000	1945
1946	605,000	14,068,000	14,451,000	28,519,000	27,067,000	4,058,000	31,125,000	41,740,000	18,509,000	60,249,000	1946
1947	406,000	10,387,000	17,175,000	27,562,000	20,869,000	7,081,000	27,950,000	31,662,000	24,256,000	56,918,000	1947
1948	283,000	13,273,000	14,203,000	27,476,000	23,276,000	4,453,000	27,729,000	36,832,000	18,656,000	55,488,000	1948
1949	426,000	12,461,000	13,588,000	26,049,000	23,433,000	5,158,000	26,591,000	36,320,000	18,746,000	55,066,000	1949
1950	335,000	12,594,000	14,115,000	26,709,000	25,413,000	4,769,000	30,182,000	38,399,000	18,884,000	57,283,000	1950
1951	314,000	14,426,000	16,191,000	30,617,000	20,318,000	4,829,000	25,147,000	35,058,000	21,020,000	56,078,000	1951
1952	223,000	13,560,000	16,878,000	30,438,000	23,907,000	7,344,000	31,251,000	37,690,000	24,222,000	61,912,000	1952

†Figures for Area 2 for 1937 and thereafter include halibut which were taken incidentally to cod fishing after the closure of Area 2, as allowed by regulations of the International Fisheries Commission for these years. The approximate amounts are : 278,000 lbs. in 1937; 280,000 lbs. in 1938; 372,943 lbs. in 1939; 304,155 lbs. in 1940; 510,204 lbs. in 1941; 55,895 lbs. in 1942; 856,360 lbs. in 1943; 844,596 lbs. in 1944; 920,000 lbs. in 1945; 1,184,000 lbs. in 1946; 392,997 lbs. in 1947; 898,246 lbs. in 1948; 870,138 lbs. in 1949; 319,745 lbs. in 1950; 885,000 lbs. in 1951, and 433,000 lbs. in 1952. In Area 3, 58,632 lbs. in 1949, and 94,000 lbs. in 1951; and 9,600 lbs. in 1952.

*This figure includes landings from Areas 1 and 4, as defined in the regulations for 1935. This amount should compare directly with the Area 1 catch of previous years, as it is not believed any fish were landed in 1935 from that portion of Area 4 which included Bering Sea.

NOTE: — 1952 figures of the International Fisheries Commission are preliminary and subject to further correction. In data for 1951 and thereafter Area 1 includes the catches from Areas 1A and 1B and Area 2 include the catches from Areas 2A, 2B and 2C.

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PACIFIC HALIBUT CATCH-AREAS 2 and 3 by Months

MONTH	Pounds								
	AREA 2†			AREA 3			TOTAL		
	U. S.	Canada	Total	U. S.	Canada	Total	U. S.	Canada	Total
May	5,804,000	8,791,000	14,595,000	4,382,000	675,000	5,057,000	10,186,000	9,466,000	19,652,000
June	5,712,000	6,300,000	12,012,000	11,921,000	3,898,000	15,819,000	17,633,000	10,198,000	27,831,000
July	119,000	53,000	172,000	6,662,000	2,693,000	9,355,000	6,781,000	2,746,000	9,527,000
August	1,698,000	1,687,000	3,395,000	941,000	78,000	1,019,000	2,639,000	1,765,000	4,404,000
September	79,000	31,000	110,000	...	...	...	79,000	31,000	110,000
October	91,000	15,000	106,000	...	...	...	91,000	15,000	106,000
November	57,000	1,000	58,000	1,000	...	1,000	58,000	1,000	59,000
Total	13,560,000	16,878,000	30,438,000	23,907,000	7,344,000	31,251,000*	37,467,000	24,222,000**	61,689,000

* This total includes 433,000 lbs. of halibut which were taken incidentally to cod fishing in Area 2 and 9,600 in Area 3, as allowed by the 1952 Regulations of the International Fisheries Commission.

** This table does not include the partially estimated amount of 223,000 lbs. landed from Areas 1A and 1B.

† Area 2 comprises the present Areas 2A, 2B and 2C, and Area 3 the present 3A, 3B and 4.

NOTE: — 1952 figures of the International Fisheries Commission are preliminary and subject to further correction.

catch rise steadily from 14.4% in 1932 to 39.2% of the total catch in 1952.

Market preferences of the fleet showed some exceedingly interesting deviations from the past — most of them evidently due to application of the split seasons with their one-trip possibilities. Hopes of vessels to get in more than one trip in the 10-day seasons—17 days to Westward—have been dashed by the precipitate drop in catch-per-unit after the opening of the season.

The trend has been to make one trip and hike for home with it. Accordingly, Seattle landings increased sharply, gaining more than 2 million pounds to 13.1 million. Alaska landings went up also, but deliveries of American vessels to Prince Rupert declined.

Rupert's Canadian Trade Heaviest in History

However, Canadian vessels showed a liking for Prince Rupert, and that port had the heaviest halibut deliveries from *Canadian* vessels in its history, although the aggregate business did not add up to the great totals landed there by both fleets in the early '20s.

It is notable that Alaska's over-all deliveries increased by 2 million pounds over 1951, although they did not quite attain the landing levels of the five years before that.

The increase was most notable at Ketchikan—which suffered a severe drop in 1951. Despite the special season in the sub-area to Westward, Central Alaska landings eased by 1 million pounds in 1952.

An interesting variation from the norm is found in the deliveries of Canadian vessels to American ports,

PACIFIC HALIBUT CATCH SINCE 1914

YEAR	Pounds										YEAR
	AMERICAN VESSELS					CANADIAN VESSELS				GRAND TOTAL	
	Seattle *	Prince Rupert **	Alaska	Oregon & California ***	Total American	Pr. Rupert, Butedale, Klemtu	Vancouver, New Westm., Vancouver I.	American Ports	Total Canadian		
1914	41,825,575	1,877,000	5,175,993	...	48,878,568	8,742,100	4,991,500	...	13,733,600	62,612,168	1914
1915	33,133,313	11,323,500	5,561,577	...	50,018,390	8,444,715	4,791,000	...	13,235,715	63,254,105	1915
1916	20,259,446	13,810,895	6,961,628	...	41,031,969	6,710,500	5,258,000	...	11,968,500	53,000,469	1916
1917	22,884,434	14,216,030	6,792,138	...	43,892,602	5,839,030	3,686,000	...	9,525,030	53,417,632	1917
1918	16,455,564	10,790,500	6,076,500	...	33,322,564	4,338,000	1,552,000	...	5,890,000	39,212,564	1918
1919	16,968,639	13,000,700	7,366,991	...	37,336,330	6,120,000	1,957,000	...	8,077,000	45,413,330	1919
1920	19,692,915	14,676,400	8,035,000	...	42,404,315	7,190,000	2,010,600	...	9,200,600	51,604,915	1920
1921	17,127,783	19,531,400	8,784,029	...	45,443,212	8,906,000	4,149,400	...	13,055,400	58,498,612	1921
1922	14,602,780	17,248,900	4,772,038	...	36,623,718	8,510,000	3,559,500	...	12,069,500	48,693,218	1922
1923	12,017,312	20,366,600	8,283,590	...	40,667,502	9,392,900	3,707,200	...	13,100,100	53,767,602	1923
1924	11,889,080	20,913,200	12,663,776	...	45,466,056	8,181,500	4,043,500	...	12,225,000	57,691,056	1924
1925	11,197,474	22,434,800	9,752,465	400,000	43,784,739	6,181,600	3,207,600	...	9,389,200	53,169,939	1925
1926	10,156,630	20,483,800	14,011,005	600,000	45,252,435	6,869,200	4,156,500	...	11,025,700	56,278,135	1926
1927	11,917,150	18,664,400	15,386,766	400,000	46,818,316	6,941,000	1,523,400	...	8,464,400	55,282,716	1927
1928	13,788,775	20,389,700	9,623,700	760,000	44,562,175	8,349,500	1,541,500	...	9,891,000	54,453,175	1928
1929	12,359,170	20,599,200	12,882,426	1,103,888	46,890,984	8,045,100	1,747,800	...	9,792,900	56,683,884	1929
1930	12,671,470	16,997,800	11,389,756	930,000	41,989,832	7,006,600	1,475,200	...	8,481,800	50,471,632	1930
1931	15,087,672	10,573,300	9,638,150	953,000	36,252,122	6,202,400	1,424,800	...	7,627,200	43,879,322	1931
1932	22,000,296	10,633,800	4,568,829	1,050,000	38,253,025	4,227,700	2,023,200	...	6,250,900	44,503,925	1932
1933	22,263,992	8,757,300	6,781,451	679,066	38,461,454	5,649,200	2,630,700	...	8,300,255	46,761,709	1933
1934	20,718,328	8,591,983	7,132,059	1,288,980	37,731,350	7,946,499	1,784,873	...	9,731,372	47,462,722	1934
1935	22,388,941	6,927,014	6,538,114	1,280,911	37,134,980	7,636,694	2,563,276	...	10,206,054	47,341,034	1935
1936	22,726,642	6,204,645	8,654,364	706,646	38,291,697	8,111,472	2,468,936	...	10,584,653	48,876,350	1936
1937	21,351,684	7,017,857	8,646,993	690,710	37,707,244	9,032,623	2,711,562	...	11,765,314	49,472,558	1937
1938	20,995,966	7,324,178	8,220,752	704,734	37,264,140	8,617,890	3,384,569	192,210	12,194,669	49,458,809	1938
1939	20,070,259	9,319,026	6,897,208	1,013,304	37,299,797	9,904,372	3,466,362	94,428	13,465,162	50,764,957	1939
1940	18,863,872	11,210,740	9,481,893	1,014,321	40,570,826	9,323,133	3,355,516	5,223	12,683,872	53,254,698	1940
1941	19,095,973	10,036,640	8,998,580	1,123,594	39,254,787	8,708,902	4,173,967	76,630	12,959,499	52,214,286	1941
1942	14,865,306	13,430,294	10,169,162	771,477	39,236,239	5,997,895	5,203,996	65,680	11,201,891	50,438,130	1942
1943	13,278,341	12,309,595	14,096,356	1,046,144	40,730,436	6,281,348	6,487,010	138,765	12,907,123	53,637,559	1943
1944	11,881,680	5,444,672	21,853,111	879,511	40,058,974	8,458,974	4,823,502	59,211	13,340,173	53,399,147	1944
1945	12,651,000	4,571,000	21,049,000	1,093,000	39,364,000	11,606,000	3,503,000	192,000	15,301,000	54,665,000	1945
1946	13,932,000	4,384,000	22,502,000	928,000	41,740,000	15,117,000	2,919,000	473,000	18,509,000	60,249,000	1946
1947	5,816,000	2,585,000	22,422,000	841,000	31,664,000	17,868,000	6,117,000	270,000	24,255,000	55,919,000	1947
1948	9,941,000	2,479,000	23,790,000	621,000	36,831,000	13,665,000	4,813,000	179,000	18,657,000	55,488,000	1948
1949	10,017,000	4,205,000	21,473,000	625,000	36,320,000	13,745,000	4,318,000	683,000	18,746,000	55,066,000	1949
1950	8,663,000	3,683,000	25,265,000	788,000	38,399,000	15,237,000	3,577,000	70,000	18,884,000	57,283,000	1950
1951	11,100,000	4,389,000	19,034,000	535,000	35,058,000	15,717,000	4,742,000	561,000	21,020,000	56,078,000	1951
1952	13,153,000	3,037,000	21,100,000	400,000	37,690,000	19,025,000	4,223,000	974,000	24,222,000	61,912,000	1952

Note.-- 1952 figures of the International Fisheries Commission are preliminary and subject to further correction.

*Includes the very small amount of fish landed at Neah Bay and elsewhere on Puget Sound.

**Includes the fish occasionally landed by American vessels at Butedale, Vancouver and elsewhere in Canada.

***Landings in Oregon and California not segregated prior to 1925.

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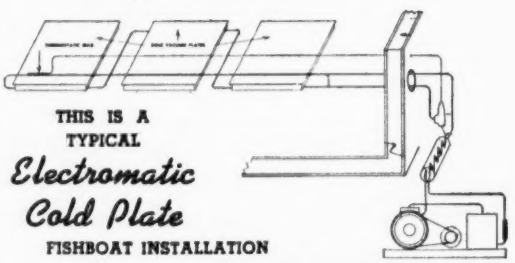

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1952 - HALIBUT ARRIVALS AT ALASKA PORTS* - 1952

Month	(Data in Pounds) Ketchikan	Wrangell	Petersburg	Sitka	Juneau	Pelican	Misc. S.E. Alaska	Central† Alaska	Total
May	1,880,000	180,000	896,000	834,000	1,002,000	967,000	65,000	294,000	6,118,000
June	4,621,000	170,000	1,678,000	1,043,000	1,337,000	1,244,000	74,000	1,938,000	12,105,000
July	1,034,000	41,000	367,000	180,000	381,000	145,000	1,000	308,000	2,457,000
August	160,000	...	11,000	24,000	5,000	...	...	136,000	336,000
September	...	...	28,000	...	...	10,000	...	...	38,000
October	...	2,000	23,000	...	1,000	...	...	...	26,000
November	...	...	17,000	1,000	2,000	...	...	...	20,000
Totals	7,695,000	393,000	3,020,000	2,082,000	2,728,000	2,366,000	140,000	2,676,000	21,100,000
Previous Years									
1951	5,170,000	496,000	2,869,000	1,985,000	2,386,000	2,294,000	192,000	3,642,000	19,034,000
1950	6,992,000	479,000	3,140,000	3,103,000	3,823,000	3,351,000	75,000	4,372,000	25,265,000
1949	7,628,000	499,000	2,675,000	2,008,000	2,473,000	2,102,000	41,000	4,689,000	22,115,000
1948	7,700,000	716,000	2,548,000	2,990,000	2,797,000	2,362,000	114,000	4,742,000	23,969,000
1947	7,503,000	643,000	2,828,000	2,634,000	5,432,000**	...	...	3,389,000	22,429,000
1946	9,918,000	699,000	2,943,000	2,684,000	4,363,000**	...	...	2,279,000	22,886,000
1945	2,277,000	585,000	2,161,000	2,773,000	4,363,000**	...	...	2,221,000	20,887,000
1944	9,554,962	1,008,312	2,486,084	2,694,073	3,540,637	...	...	2,569,043	21,853,111
1943	7,450,730	727,157	1,936,825	1,691,697	2,289,947	...	...	...	14,096,356
1942	5,749,469	469,037	1,559,221	834,046	1,816,148	...	...	...	10,169,162
1941	3,367,567	375,135	1,463,801	2,173,697	1,616,928	...	...	...	8,998,580
1940	3,798,134	400,735	1,718,490	1,370,412	1,984,511	...	...	...	9,481,893
1939	2,263,927	279,660	1,460,190	931,557	2,001,999	...	...	...	6,897,208
1938	2,828,111	414,928	1,965,843	906,852	2,039,814	...	...	...	8,220,752
1937	3,642,996	590,834	1,352,807	893,602	1,832,533	...	...	...	8,646,993
1936	3,556,364	494,221	1,979,813	945,933	1,541,674	...	...	...	8,654,364
1935	3,752,488	112,060	474,672	667,811	1,341,864	...	...	...	6,538,114
1934	3,155,474	284,950	1,002,792	1,172,264	1,463,761	...	...	...	7,132,059

†Port Williams, Cordova, Valdez, Seldovia, Anchorage, Sand Point.
*Landings by Canadian vessels in Alaska included which were 900,000 lbs. in 1952, 561,000 lbs. in 1951, and 70,000 lbs. in 1950.
**Includes landings made at Pelican.
NOTE: 1952 figures of the International Fisheries Commission are preliminary and subject to further correction.

where they sold nearly 1 million pounds of halibut in 1952—far greater than in any previous year. Thus, American sales in Canada dropped by 1.35 million pounds; while Canadian sales in United States ports rose to .97 million.

Seattle Market Prices Rose a Cent in 1952

Average price of halibut on the Seattle market in 1952 rose by nearly a cent over the 1951 level, but still was 4c per lb. under 1950 pricing, when the trade suffered severe reverses in trying to sell the fish it had frozen at an average price of 26.65c.

The 1952 average price on the Seattle market was 22.69c.

Pricing worked out in a rather peculiar manner, with No. 1 Western fish actually drawing better money—23.88c average—than No. 1 Local, which were knocked-down at an average of 22.45c. This departure from normal buying could be traced to the fact that the Western fish was perhaps more evenly spread over the buying season; and also to the preference which the present buyers have for fish of the large medium sizes.

Significantly also, Western Chix

OREGON AND CALIFORNIA HALIBUT LANDINGS — 1952

Month	California Pounds	Oregon Pounds
May	35,000	148,000
June	29,000	110,000
July	6,000	23,000
August	6,000	30,000
September	3,000	...
October	5,000	...
November	6,000	....
Total	90,000	311,000

NOTE: 1952 figures of the International Fisheries Commission are preliminary and subject to further correction, particularly California's, which include some estimation.

1952 - Halibut Arrivals at British Columbia Ports* 1952

MONTH	(Pounds) Prince Rupert Butedale, Klemtu *	New Westminster Vancouver, Namu	District No. 3 and Victoria	Total Canadian Vessels	American Vessels at Prince Rupert	GRAND TOTAL
May	7,792,000	628,000	1,046,000	9,466,000	839,000	10,305,000
June	8,148,000	648,000	617,000	9,412,000	1,362,000	10,774,000
July	2,129,000	429,000	...	2,558,000	738,000	3,296,000
August	926,000	839,000	...	1,765,000	67,000	1,832,000
September	14,000	17,000	...	31,000	...	31,000
October	15,000	...	...	15,000	...	15,000
November	1,000	...	...	1,000	...	1,000
TOTAL	19,025,000	2,561,000	1,663,000	23,248,000	3,006,000	26,254,000
Previous Years						
1951	15,717,000	2,819,000	1,923,000	20,459,000	4,381,000	24,840,000
1950	15,237,000	1,689,000	1,888,000	18,814,000	3,684,000	22,498,000
1949	13,745,000	2,129,000	2,189,000	18,063,000	4,205,000	22,268,000
1948	13,665,000	2,641,000	2,172,000	18,478,000	2,479,000	20,957,000
1947	17,868,000	4,298,000	1,819,000	23,985,000	2,585,000	26,570,000
1946	15,117,000	2,023,000	896,000	18,036,000	4,378,000	22,413,000
1945	11,606,000	2,340,000	1,163,000	15,109,000	4,571,000	19,680,000
1944	8,457,460	3,604,517	1,218,985	13,280,962	5,444,672	18,725,634
1943	6,381,348	5,155,435	1,331,575	12,907,123	12,337,126	25,018,553
1942	5,910,928	4,035,866	1,104,459	11,201,891	13,415,795	24,467,048
1941	8,625,079	3,139,021	1,014,192	12,959,499	10,033,720	28,812,612
1940	9,310,667	1,999,314	1,002,401	12,683,872	11,210,740	25,632,122
1939	9,904,289	3,018,504	445,500	13,465,162	9,319,026	22,687,319
1938	8,619,526	2,794,557	586,619	12,194,669	7,324,178	19,343,390
1937	9,026,372	2,333,370	377,796	11,765,314	7,015,057	18,773,489
1936	8,113,365	2,054,167	399,200	10,584,653	6,205,377	16,772,209
1935	7,636,704	2,246,196	349,300	10,206,054	6,927,581	17,159,781
1934	7,946,499	1,513,273	271,600	9,731,372	8,591,983	18,323,355

Does not include landings by Canadian vessels in Alaska of 900,000 lbs., and in the state of Washington of 74,000 lbs. in 1952. 561,000 lbs. in 1951 and 70,000 lbs. in 1950 were landed in Alaska by Canadian vessels.

*Includes landings from Minor British Columbia Ports.
NOTE: 1952 figures of the International Fisheries Commission are preliminary and subject to further corrections.

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North Pacific Halibut Seasons

YEAR	AREA 2			AREA 3			YEAR
	Opened	Closed	Fishing Days	Opened	Closed	Fishing Days	
1933	Feb. 1	Aug. 25	206	Feb. 1	Oct. 26	268	1933
1934	Mar. 1	Aug. 19	172	Mar. 1	Oct. 27	241	1934
1935*	Mar. 1	Sept. 6	159*	Mar. 1	Dec. 26	270*	1935
1936	Mar. 16	Aug. 10	148	Mar. 16	Nov. 3	233	1936
1937	Mar. 16	July 28	135	Mar. 16	Oct. 19	218	1937
1938	Apr. 1	July 29	120	Apr. 1	Oct. 29	212	1938
1939	Apr. 1	July 29	120	Apr. 1	Oct. 28	211	1939
1940	Apr. 1	July 13	104	Apr. 1	Sept. 26	179	1940
1941	Apr. 1	June 30	91	Apr. 1	Sept. 14	167	1941
1942	Apr. 16	June 29	75	Apr. 16	Sept. 25	163	1942
1943	Apr. 16	June 20	66	Apr. 16	Sept. 8	146	1943
1944**	Apr. 16	July 9	51**	Apr. 16	Nov. 30	194**	1944
1945	May 1	June 15	46	May 1	Sept. 24	147	1945
1946	May 1	June 11	42	May 1	Aug. 19	111	1946
1947***	May 1	June 8	39***	May 1	Aug. 17	109***	1947
1948	May 1	June 1	32	May 1	July 11	72	1948
1949	May 1	June 3	34	May 1	July 12	73	1949
1950	May 1	June 1	32	May 1	July 5	66	1950
1951	May 1	May 28	28†	May 1	June 25	56	1951
1952	May 14	June 8	26†	May 14	June 12	58†	1952

NOTE: — All dates given are for the legal season. Fishing times given are actual periods of fishing, with allowance made in certain years for delays in fishing due to strikes and disputes. Closure generally at midnight of dates given.

* Fleet tied-up voluntarily until April 1.
** Fleet tied-up until May 20 in protest against OPA ceiling prices.
*** Seattle fleet largely tied-up until July 1, due to crew share dispute.
† Does not include special post-season open fishing periods in sub-areas.

SEATTLE HALIBUT SALES BY MONTHS AND GRADES WITH AVERAGE PRICES PAID

PERIOD	WESTERN NO. 1		WESTERN NO. 2		LOCAL NO. 1		LOCAL NO. 2		TOTAL	
	No. 1-lbs.	Average Price	No. 2-lbs.	Average Price	No. 1-lbs.	Average Price	No. 2-lbs.	Average Price	Pounds	Average Price
1952										
May	984,218	21.58¢	473,982	19.70¢	1,013,320	20.73¢	346,393	17.86¢	2,817,913	20.51¢
June	1,154,833	24.83	794,518	23.63	562,790	23.38	217,451	19.55	2,729,592	23.66
July	1,696,515	24.40	1,659,989	22.46	5,906	28.09	...	...	3,362,410	23.45
August	327,944	24.70	491,389	22.15	700,799	23.66	701,324	21.48	2,221,456	22.87
September	...	...	...	...	52,169	25.55	...	...	52,169	25.55
October	...	...	...	...	73,018	25.40	...	...	73,018	25.40
November	...	...	...	...	30,744	25.34	...	...	30,744	25.34
Totals	4,163,510	23.88	3,419,878	22.30	2,438,746	22.45	1,265,168	20.22	11,287,302	22.69
1951										
May	1,438,991	19.89	734,603	17.91	1,409,331	20.79	658,718	18.25	4,241,643	19.59
June	1,022,159	25.98	701,682	23.03	67,579	24.52	39,931	20.71	1,831,351	24.68
July	983,045	23.03	820,520	22.01	39,415	29.88	...	...	1,842,980	22.72
August	...	...	...	...	821,930	23.22	673,245	20.48	1,495,175	21.99
September	...	...	...	...	109,556	31.17	...	...	109,556	31.18
October	...	...	...	...	76,800	32.43	...	...	76,800	32.43
November	...	...	...	...	32,877	31.03	...	...	32,877	31.04
Totals	3,444,186	22.60	2,256,805	20.99	2,557,488	22.74	1,371,894	19.41	9,630,382	21.81
1950										
May	778,430	26.32	457,089	26.21	1,126,310	25.10	630,233	20.59	2,992,062	24.64
June	999,483	28.17	612,731	26.85	304,880	27.93	219,829	23.79	2,136,923	27.31
July	1,073,736	29.98	1,001,459	26.37	7,234	30.49	...	...	2,082,429	28.25
August	...	...	...	...	29,416	34.14	483	35.61	29,899	34.16
September	...	...	...	...	59,925	33.46	95	35.78	60,020	33.46
October	...	...	...	...	56,509	34.81	...	...	56,509	34.81
November	...	...	...	...	25,735	33.69	...	...	25,735	33.69
Totals	2,851,649	28.35	2,071,279	26.47	1,610,009	26.62	850,640	21.43	7,383,577	26.65
1949 Totals	3,574,995	21.94	3,252,136	19.60	1,378,131	24.33	913,933	17.52	9,019,195	21.26
1948 Totals	3,437,604	23.34	2,833,023	20.33	1,552,613	21.54	1,256,298	13.26	9,079,738	20.70
1947 Totals	3,411,224	26.24	1,715,252	22.84	294,724	26.19	172,103	18.36	5,593,303	24.96
1946 Totals	5,132,835	23.26	4,948,678	21.55	1,690,861	18.59	1,350,706	16.28	13,123,080	21.31
1945 Totals	5,025,935	17.52	4,083,847	15.95	1,521,452	17.46	1,292,294	16.09	11,923,528	16.84
1944 Totals	4,486,546	17.50	3,261,922	15.99	1,924,093	17.59	1,733,012	16.05	11,405,123	16.86
1943 Totals	4,850,126	23.40	3,090,602	21.10	2,060,461	23.45	2,415,778	21.51	12,416,460	22.47
1942 Totals	5,082,094	18.10	4,234,955	16.66	2,583,100	16.71	2,186,827	15.12	14,086,976	16.95
1941 Totals	8,394,343	11.98	5,653,244	11.79	2,595,348	11.60	2,030,081	9.94	18,393,670	11.82
1940 Totals	7,343,438	10.67	5,468,809	10.25	2,901,430	10.33	2,823,870	9.44	18,565,838*	10.30
1939 Totals	8,171,019	9.30	5,399,244	8.84	2,962,012	8.49	3,285,078	7.08	19,892,739	8.69
1938 Totals	9,087,516	8.90	5,536,117	8.60	2,532,098	8.43	3,614,035	6.54	20,769,766	8.35
1937 Totals	10,013,021	9.79	5,523,057	8.33	2,608,758	9.71	3,021,157	7.60	21,165,993	9.09
1936 Totals	10,431,015	9.17	6,974,279	8.50	2,762,428	8.76	2,404,854	7.76	22,572,576	8.76
1935 Totals	11,465,100	.0864	4,710,000	.0794	3,066,500	.0825	2,450,100	.0719	21,691,700	.0827
1934 Totals	10,265,600	.0776	3,784,400	.0666	2,912,050	.0867	3,243,750	.0656	20,205,800	.0749
1933 Totals	10,785,700	.0747	3,912,000	.0586	2,718,300	.0787	4,345,400	.0516	21,761,400	.0677
1932 Totals	9,189,700	.0559	3,615,000	.0333	3,433,200	.0651	5,553,250	.0381	21,791,150	.0484

*Includes 11,736 lbs. landed in January and February.

Data from 1936 to 1941 are official figures, based upon statistics of the United States Fish & Wildlife Service, which are based on amounts of halibut actually weighed out, graded and paid for. Data for years previous to 1936 represent fares as hailed and sold on the Seattle Fish Exchange.

Note that prices for 1936 and after are quoted in cents and for previous years in decimals of a dollar.

Figures given here are for sales over the Seattle Fish Exchange only and quantities do not coincide with other totals for Puget Sound lands, which include minor quantities landed and sold elsewhere.

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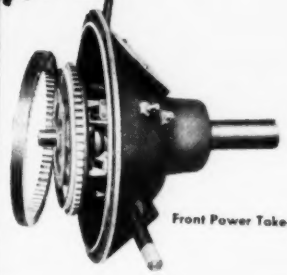

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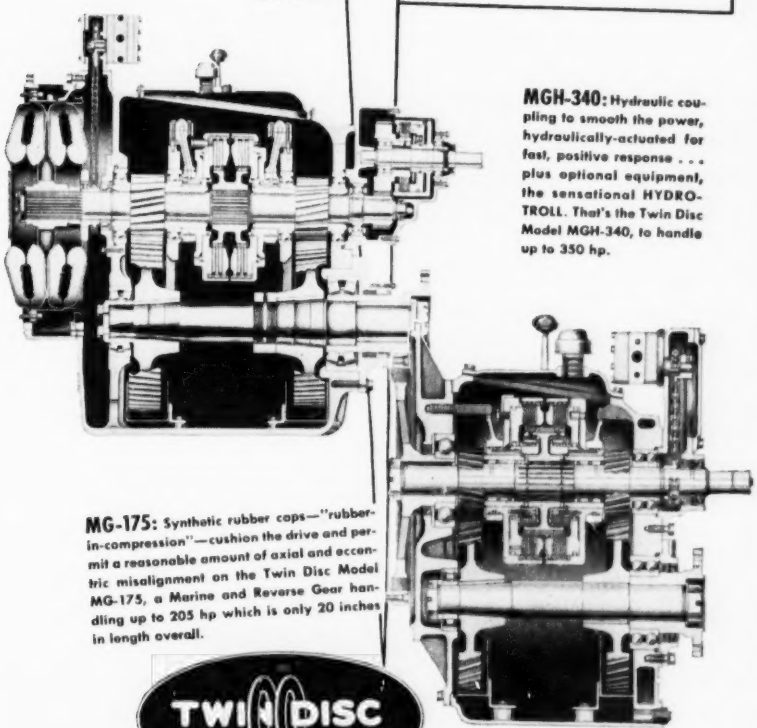
MG-165	105-175	1200-2000
MG-200	90-175	600-1500
MG-201	120-180	600-1000
MG-175**	85-205	900-2100
MGH-220*	80-230	1200-2100
MG-302**	150-275	600-1500
MGH-340*	150-340	700-1500

*Hydraulic coupling gears: can be equipped with HYDRO-TROLL variable-fill coupling to multiply reduction for slo-speed.

**With rubber block drive.



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POST-SEASON HALIBUT LANDINGS

Year	Area 2 Pounds	Area 3 Pounds
1937	278,000	...
1938	280,000	...
1939	372,943	...
1940	304,155	...
1941	510,204	...
1942	55,895	...
1943	856,360	...
1944	844,596	...
1945	920,000	...
1946	1,184,000	...
1947	392,997	...
1948	898,246	...
1949	870,138	58,632
1950	319,745	...
1951	885,000	94,000
1952	433,000	9,600

NOTE: —Under regulations of the International Fisheries Commission, boats operating under permit from the commission and engaged in bona fide fishing operations with long-line gear for species other than halibut may land halibut taken incidentally to such operations to the amount of 1 pound of halibut to each 7 pounds of other species so taken and landed. Such operations may be conducted after the close of one halibut area while another remains open, or until November 15.

and Large, averaging 22.30c, sold almost on parity with No. 1 Local halibut, whose 22.45c average was only a shade higher.

1952 Halibut Seasons Continue Short and Sweet

Halibut fishing season on the Local grounds in 1952 was limited to 26 days—the shortest season on record. However, it will be noted that these few days served to take a heavy catch. The Area 2 season was two days shorter than that of the year before, even though it took more fish. Better weather contributed importantly to the shortness of the season, and the late opening—May 14—may have had something to do with it also.

The halibut regulations for 1952 continued the two sub-areas in Area 2—Area 2B in southern Hecate Strait below a line from Cumshewa Head to Moore Island—and Area 2C, the Forrester Island grounds, from a line southwest from Pt. Cornwallis to a parallel line running southwest from Cape Addington.

In addition, a sub-area—3B—was provided to Westward. This is bounded by a line from Deer Island through Caton Island, and one running true west from Cape Sarichef. This sub-area was closed to all fishing until August 2, when fishing was opened with no limit and outside the Area 3 quota until August 19.

The two Local sub-areas opened July 26 for a season of 10 days, closing August 5—the same dates as prevailed in 1951.

A notable change in the regulations for 1952 permitted crab trawlers operating in Area 4 with trawls alone whose cod end mesh is 12″ or more to retain halibut caught incidentally to crab fishing. Retention of halibut by trawlers in other waters or under other circumstances continued to be prohibited.

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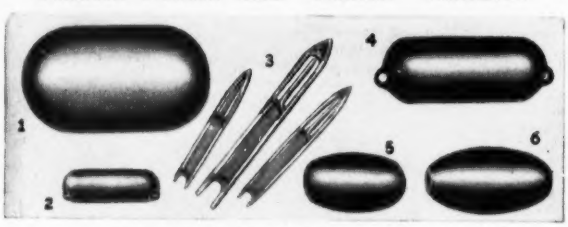

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HALIBUT CATCH BY SUB-AREAS

	AREA 2B (Lower Hecate Strait)				AREA 2C (Forrester Island)				AREA 3B (West of Sanak Is.)		AREA 4 (Bering Sea)	
	CATCH		No. of Vessels		CATCH		No. of Vessels		CATCH	No. of Vessels	CATCH	No. of Vessels
	1951	1952	1951	1952	1951	1952	1951	1952	1952		1952	
Canada	1,460,000	1,435,000	56	56	263,000	264,000	8	13	69,000	1	.....	.....
U. S.	893,000	618,000	46	32	925,000	1,063,000	35	78	809,000	38	133,000	6
U. S. & Canada	2,353,000	2,053,000	102	88	1,188,000	1,327,000	43	91	878,000	39	133,000**	6

**About 120,000 pounds of the Area 3B catch was taken in the portion of that area lying north of the Aleutian Islands. This amount combined with the 133,000 catch in Area 4 gives a total catch of 253,000 pounds from Bering Sea waters.

Areas 2B and 2C were opened for 10 days fishing on July 26 in 1951 and in 1952.

Areas 3B and 4 were opened for 17 days fishing on August 2 in 1952.

1952-Seattle Halibut Fleet Landings by Months-1952

MONTHS	Trips	HALIBUT NO. 1		HALIBUT NO. 2		LINGCOD		ROCKFISH		SABLEFISH		TOTAL	
		Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January	10	...	...	...	...	63,330	$13,488	7,449	$ 730	...	$ ...	70,779	$ 14,218
February	17	...	...	...	...	87,656	14,425	5,177	445	...	...	92,833	14,870
March	18	...	...	...	...	183,373	26,786	8,564	657	...	...	191,937	27,443
April	9	11,446	$ 3,004	...	...	48,644	4,999	3,320	236	716	54	64,126	8,293
May	69	1,997,538	422,639	820,375	$ 155,339	8,573	607	3,164	156	2,938	327	2,832,588	579,068
June	75	1,717,623	417,453	1,011,969	230,162	3,143	196	2,795	182	58,469	6,791	2,793,999	654,784
July	87	1,702,421	415,665	1,659,989	372,700	299	26	4,067	202	66,098	7,265	3,432,874	795,858
August	132	1,028,743	246,547	1,192,713	260,495	3,969	200	74,102	3,541	154,551	19,204	2,454,078	529,987
September	32	52,169	13,331	...	...	1,548	105	22,853	1,133	391,685	58,679	468,255	73,248
October	42	73,018	18,548	...	...	2,447	120	33,092	1,618	630,693	98,999	739,250	119,285
November	23	30,744	7,792	...	...	3,081	943	13,687	683	292,651	49,534	340,163	58,952
TOTAL	514	6,613,702	$1,544,979	4,685,046	$1,018,696	406,063	61,895	178,270	9,583	1,597,801	240,853	13,480,882	2,876,006
1951 Total	485	6,011,835	$1,362,710	3,628,699	$ 740,182	279,953	$ 39,354	244,289	$ 16,453	2,004,053	$ 265,082	12,168,829	$ 2,423,781
1950 Total	371	4,461,658	1,237,069	2,921,919	730,756	363,641	32,974	152,139	8,052	1,090,129	196,838	8,989,486	2,204,577
1949 Total	473	4,953,126	1,119,834	4,166,069	797,911	418,202	39,457	192,544	12,894	1,813,775	177,709	11,543,370	2,147,796
1948 Total	461	4,990,417	1,136,824	4,089,321	742,761	491,683	53,744	229,698	14,387	1,372,309	227,947	11,200,428	2,175,663
1947 Total	302	3,705,948	972,481	1,887,355	423,403	301,745	31,630	165,098	12,149	1,378,894	179,151	7,438,840	1,619,199
1946 Total	458	6,823,696	1,509,839	6,299,384	1,286,742	261,803	23,787	218,598	14,136	1,358,433	199,832	14,961,914	3,034,336
1945 Total	459	6,547,387	1,148,683	5,376,141	2,008,265	893,283	86,952	287,623	24,030	572,376	65,816	13,676,821	2,185,062

SIZE OF HALIBUT FLEET

(INCLUDES REGULAR HALIBUT BOATS ONLY)

YEAR	UNITED STATES FLEET				CANADIAN FLEET				COMBINED FLEETS			
	Area 2 #of Boats	Area 2 #of Men	Area 3 #of Boats	Area 3 #of Men	Area 2 #of Boats	Area 2 #of Men	Area 3 #of Boats	Area 3 #of Men	Area 2 #of Boats	Area 2 #of Men	Area 3 #of Boats	Area 3 #of Men
1943	247	1,037	107	942	162	767	3	24	409	1,804	110	966
1944	278	1,056	84	753	278	831	4	34	485	1,887	88	787
1945	316	1,253	97	837	175	867	3	26	491	2,120	100	863
1946	373	1,373	116	921	187	952	5	41	560	2,325	121	962
1947	350	1,302	119	887	215	1,168	5	40	565	2,470	124	927
1948	403	1,496	139	1,095	249	1,221	5	39	652	2,717	144	1,134
1949	374	1,452	149	1,134	225	1,153	5	41	599	2,605	154	1,175
1950	426	1,654	150	1,147	235	1,210	5	39	661	2,864	155	1,186
1951	394	1,574	148	1,091	270	1,346	8	66	664	2,920	156	1,156
1952	295	1,243	134	885	223	1,211	8	64	528	2,454	142	949

PERCENTAGE DIVISIONS OF CATCH BETWEEN FLEETS

Year	CANADIAN			AMERICAN			Year
	Area 2	Area 3	All Areas	Area 2	Area 3	All Areas	
1952	55.4	23.5	39.2	44.6	76.5	60.8	1952
1951	53.9	19.6	38.0	46.1	80.4	62.0	1951
1950	52.7	15.6	32.8	47.3	84.4	67.2	1950
1949	51.4	17.9	33.7	48.6	82.1	66.3	1949
1948	51.7	18.0	33.6	48.3	82.0	66.4	1948
1947	62.3	25.3	43.7	37.7	74.6	56.3	1947
1946	50.7	13.0	30.7	49.3	87.0	69.3	1946
1945	47.0	12.2	28.0	53.0	87.8	72.0	1945
1944	42.7	8.2	25.0	57.3	91.8	75.0	1944
1943	44.5	5.8	24.1	55.5	94.2	75.9	1943
1942	39.0	7.7	22.2	61.0	92.3	77.8	1942
1941	44.2	8.4	24.7	55.8	91.6	75.3	1941
1940	43.5	5.9	23.8	56.5	94.1	76.2	1940
1939	44.8	10.0	26.5	55.2	90.0	73.5	1939
1938	41.3	10.4	24.7	58.7	89.6	75.3	1938
1937	42.6	7.5	23.8	57.4	92.5	76.2	1937
1936	38.8	7.0	21.7	61.2	93.0	78.3	1936
1935	40.8	5.3	21.3	59.2	94.7	78.7	1935
1934	40.2	3.0	20.5	59.8	97.0	79.5	1934
1933	33.9	2.7	17.7	66.1	97.3	82.3	1933
1932	27.1	2.0	14.4	72.9	98.0	85.6	1932

HERRING

BRITISH COLUMBIA HERRING PRODUCTION

Year	Fish Landed Tons	CANNED HERRING Cases				Fresh and Bait Tons	Herring Meal Tons	Herring Oil (Imperial) Gallons
		1-lb. Talls	1-lb. Ovals	1/2-lb. Ovals	Total Full Cases			
1952 Spring Season	90,236	...	...	...	2,764	1,764	16,221	1,428,206
1952 Fall Season	...	...	...	...	...	...	...	...
1952 Grand Total	90,236	...	...	...	2,764	1,764	16,221	1,428,206
1951 Spring Season	72,925	...	...	...	116,674	23,820	13,388	949,801
1951 Fall Season	107,103	...	...	...	102,536	32,340	17,059	2,320,994
1951 Grand Total	180,028	...	...	...	219,210	56,160	31,447	3,270,795
1950 Spring Season	74,621.00	...	...	...	2,475	150.34	14,604.35	988,372
1950 Fall Season	114,258.00	...	...	...	61,152	605.64	17,961.08	2,308,736
1950 Grand Total	188,879.00	...	...	...	63,627	755.98	32,565.43	3,297,108
1949 Spring Season	76,546.62	2,613	...	...	2,613	2,103.35	13,361.50	548,432
1949 Fall Season	106,259.00	1,000	74,162	225	75,387	1,051.48	16,075.10	2,317,113
1949 Grand Total	182,805.62	3,613	74,162	225	78,000	3,154.83	29,436.60	2,865,545
1948 Spring Season	87,915.01	79,128	215,050	21,829	315,007	1,589.56	12,757.87	751,064
1948 Fall Season	112,705.18	...	...	...	90,202*	554.75	18,244.07	2,019,508
1948 Grand Total	200,620.19	79,128	215,050	21,829	405,209	2,144.31	31,001.94	2,770,572
1947 Spring Season	42,006.34	250,595	176,203	4,125	430,923	3,183.05	4,109.20	200,581
1947 Fall Season	77,412.98	219,635	698,786	10,748	929,719	1,045.25	7,212.09	1,092,057
1947 Grand Total	119,419.32	470,230	874,989	14,873	1,360,642	4,228.30	11,321.29	1,292,638
1946 Spring Season	29,376.48	71,537	61,290	21,975	154,802	3,304.71	3,437.30	251,838
1946 Fall Season	67,691.61	80,281	886,889	40,802½	1,007,972½	5,718.73	4,364.25	644,777
1946 Grand Total	97,068.09	151,818	948,179	62,777½	1,162,774½	9,023.44	7,801.55	896,615
1945 Spring Season	61,906.03	80,001	127,202	55,418	262,621	3,558.05	8,350.96	490,214
1945 Fall Season	70,193.36	67,296	1,056,310	30,290	1,153,896	1,131.10	4,420.45	610,643
1945 Grand Total	132,099.39	147,297	1,183,512	85,708	1,416,517	4,689.15	12,771.41	1,100,857

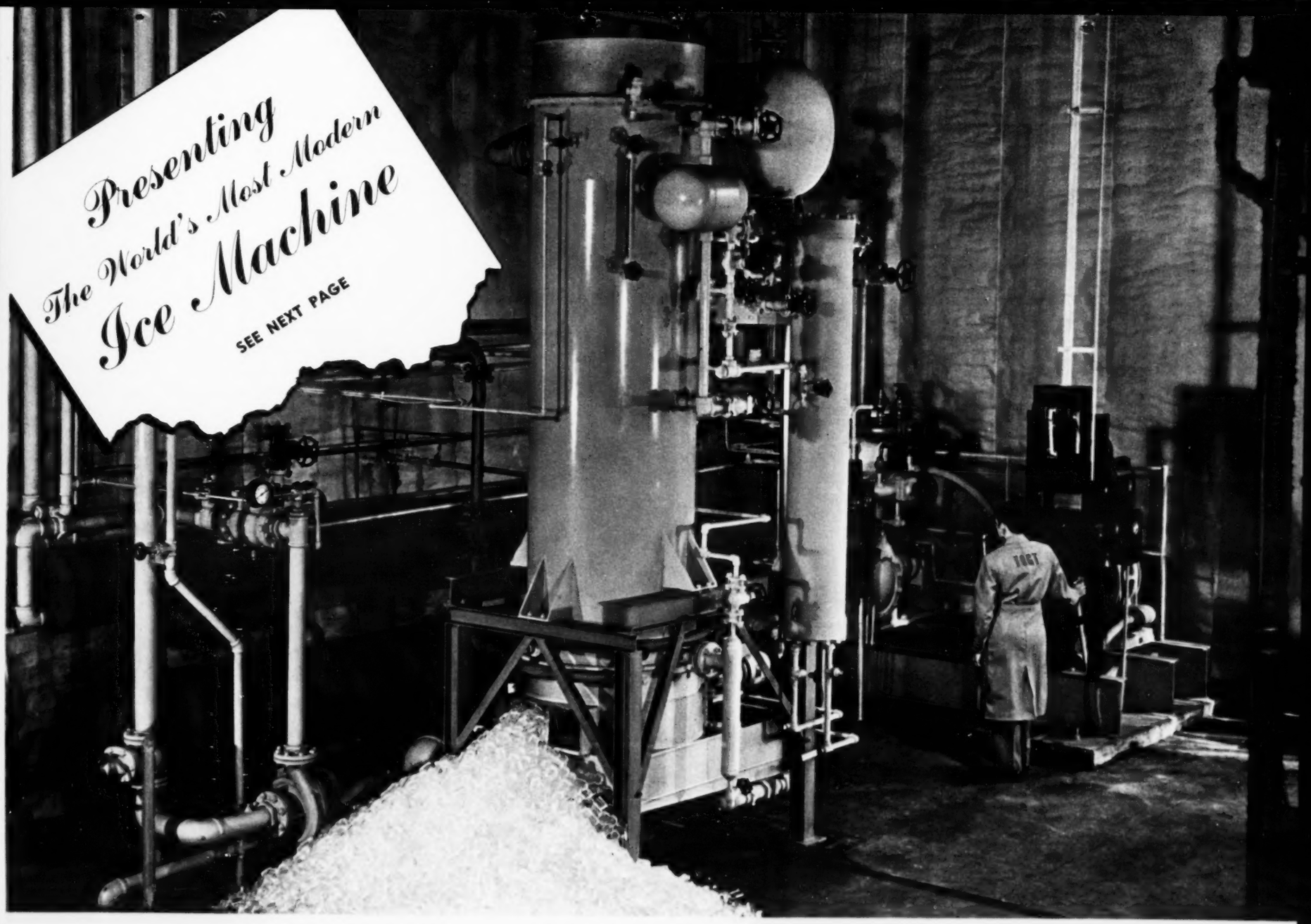
*Sizes of cans not designated.

BRITISH COLUMBIA HERRING PRODUCTS

Year	HERRING Fish Landed "Green" Cwts.	Canned Cases (48-lbs.)	Dry Salted Cwts.	Cured & Smoked Cwts.	Pickled Bbls.	Fresh & Froz.(Incl. Bait),Cwts	Oil Imperial Gallons	Herring Meal, Tons	PILCHARDS, Canned* Cases (48-lbs.)	Year
1915	467,452	**11,468	183,704	5,791	8,890	108,302	....	....	...	1915
1916	496,030	35,487	172,988	4,014	7,590	145,844	....	....	....	1916
1917	487,241	46,650	161,865	6,263	7,293	144,743	....	...	1,090	1917
1918	636,921	61,657	172,610	19,564	....	122,128	....	...	63,963	1918
1919	567,868	64,002	255,058	9,979	6,796	61,199	....	....	63,065	1919
1920	1,001,357	19,986	512,168	8,197	1,431	97,413	....	...	91,929	1920
1921	944,866	4,149	479,971	8,133	2,417	102,487	....	....	16,091	1921
1922	1,002,519	2,114	522,768	6,946	755	96,164	....	....	19,186	1922
1923	1,035,823	3,099	744,036	6,728	1,970	84,309	...	...	17,195	1923
1924	1,157,625	....	853,543	9,193	146	73,833	....	....	14,898	1924
1925	1,437,875	391	1,083,174	5,622	52	71,169	....	....	37,182	1925
1926	1,301,269	433	938,647	6,199	80	71,788	13,700	310	26,731	1926
1927**	1,724,246	....	1,048,190	15,005	138	81,222	170,450	1,838	58,501	1927
1928	1,535,118	....	1,072,188	6,187	65	114,635	68,411	831	65,097	1928
1929	1,315,667	....	923,848	6,060	187	126,717	37,264	437	98,821	1929
1930	1,221,962	....	805,973	4,713	46	86,642	60,373	1,774	55,166	1930
1931	1,480,314	43	788,227	2,315	142	71,566	110,810	3,094	17,336	1931
1932	1,003,204	....	369,420	296	50	57,322	186,173	6,195	4,622	1932
1933	1,077,373	....	513,024	2,445	100	33,701	316,213	4,078	2,946	1933
1934	820,362	2,295	414,626	3,213	132	53,448	104,710	2,570	35,437	1934
1935	1,008,507	....	302,710	4,386	117	72,848	306,767	5,262	27,184	1935
1936	1,620,625	51,695	383,337	4,335	28	44,362	782,499	10,085	35,007	1936
1937	1,929,795	27,365	203,401	3,601	68	82,181	1,283,658	14,427	40,975	1937
1938	1,328,913	23,376	149,700	52	20	73,489	929,158	9,624	69,473	1938
1939	2,164,812	222,658	160,315	13,733	1,591	56,536	1,366,607	16,482	7,300	1939
1940	3,395,013	727,292	104,812	15,816	1,737	79,878	1,700,819	24,264	59,166	1940
1941	1,688,515	1,013,329	3,850	4,643	834	96,832	584,157	8,757	58,038	1941
1942	2,040,840	1,253,978	....	....	2,440	43,600	653,710	10,896	46,451	1942
1943	1,592,249	1,221,015	...	....	....	44,870	678,464	1,011	101,356	1943
1944	1,799,600	1,211,866	....	....	2,936	79,535	857,164	851	92,882	1944
1945	2,641,988	1,416,517	....	....	...	4,689	1,100,857	1,277	75,724	1945
1946	1,941,362	1,162,774	....	...	...	180,469	896,615	780	....	1946
1947	2,380,206	1,360,642	...	...	...	84,566	1,292,638	1,132	....	1947
1948	4,012,444	405,209	....	....	...	42,886	2,648,839	30	....	1948
1949	3,658,112	78,000	43,845	....	....	63,096	2,865,545	2,944	...	1949
1950	3,716,180	63,627	100,320	....	...	15,080	3,157,574	3,066	....	1950
1951	3,600,560	219,210	....	....	....	56,160	3,270,795	31,447	....	1951
1952	1,804,720	2,764	....	....	....	35,280	1,428,206	16,221	....	1952

* Other pilchard products, and tonnage of pilchards landed, are shown in tabulation in the Fish Oil and Meal Department of this issue.

** In 1927 there were gathered 1,000 cwt. herring scales.



Many packers and shippers of meat, fish, poultry, fruit, vegetables and dairy products, in addition to ice plants and process industries, are enjoying decided ice production economies through the Tube-Ice process originated by Vogt in 1938.

Here are some of the important advantages of the Vogt Automatic Tube-Ice Machine:

LESS SPACE: The complete ice plant pictured here is of 18 tons per day capacity and can be accommodated in floor space 15' wide by 20' long . . . requiring as little as 15 per cent of the space taken by block ice equipment of equal capacity!

FASTER: Only 13 MINUTES are needed to freeze, thaw and evacuate "crushed" Tube-Ice, and 40 MINUTES for "cylinder" Tube-Ice, in contrast to the 40 to 50 HOURS for block ice.

GREATER ECONOMY: The Tube-Ice process utilizes direct application of the refrigerant to the ice freezing surfaces thereby eliminating all power costs incidental to brine systems.

SAVES LABOR: Wholly automatic in operation and discharging ice in its ultimate sized form, the Tube-Ice Machine requires no labor and only a minimum of supervision.

Shown here in operation in our Experimental Department is a Tube-Ice Machine with a 34" diameter freezer. Incorporated in this unit are exclusive features resulting from years of development work, as follows:

* A Water Pre-Cooler promotes uniformity of the ice cylinders frozen in the tubes and is furnished when top quality ice is essential.
* Dual Pressure Controls regulate refrigerant temperatures in the freezer and the water pre-cooler to appreciably lessen ice crazing and cracking.
* An Accumulator serves as an expansion chamber for the liquid feed, provides a steadier liquid level in the freezer, and prevents liquid carryover to the compressor.
* Vented Water Distributing Ferrules in each tube improve ice quality by equalizing water distribution throughout the freezing cycle.
* An automatic Blow-Down reduces concentration of solids by discharging a controlled percentage of the water in the pumping tank during each thawing period.
* Gas Injection Thawing controls the refrigerant temperature to provide for the discharge of high quality, clear ice.
* Reversible Cutter and Scraper Discharge eliminates need to adjust cutter for different types of ice and the design reduces height of the unit to a minimum.

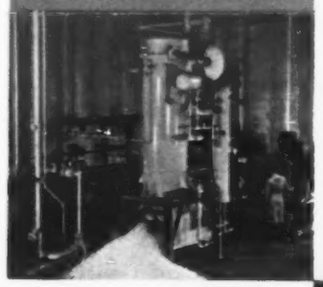
Vogt

Automatic TUBE-ICE MACHINE

Patent Numbers 2,200,424-2,239,234-2,396,308-2,444,514-2,453,140 Other Patents Pending

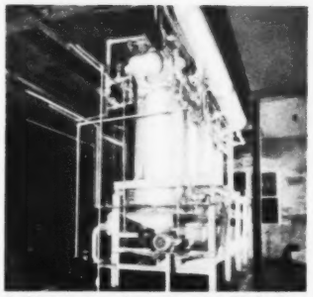
Manufactured by HENRY VOGT MACHINE CO., LOUISVILLE 10, KENTUCKY

Branch Offices: New York, Philadelphia, Chicago, Cleveland, St. Louis, Dallas, Charleston, W. Va.

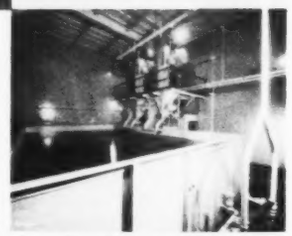


TUBE-ICE IN USE ACROSS THE NATION

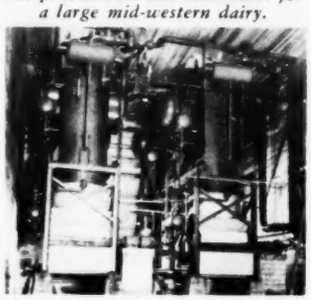
SOME OF THE LEADING INDUSTRIES NOW BEING SERVED



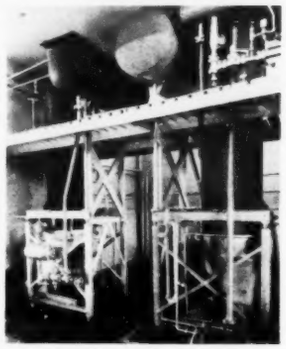
A 60 ton per day capacity Tube-Ice unit provides ice and cold water for a large mid-western dairy.



A modern brewery obtains both cold water and Tube-Ice from this installation.



This four unit Tube-Ice installation is in the plant of a California lettuce shipper.



Two Tube-Ice units serve a modern ice plant.

VOGT TUBE-ICE MACHINES may be had in capacities to meet specific requirements and inquiries for additional information will receive our prompt attention.

2000 pound and 5000 pound capacity Tube-Ice Machines are available as complete package units. They are assembled, insulated, wired, piped and tested before shipment. Only water and electrical connections are needed to place them in operation.

COMMERCIAL ICE PLANTS: Ice manufacturers are profiting from the growing demand for sized ice by installing Tube-Ice Machines whose operating economies yield increased profit margins by reducing cost per ton to a new low.

DAIRIES: A Tube-Ice Machine has the unique ability to provide both cold water and ice from the one unit . . . two essential services required to process milk and butter and to guard freshness of the products.

MEAT PACKERS: Sized Tube-Ice is easily handled by conveyors or spouts to fill ice bunkers when shipping meat. It permits easy circulation of air to lower temperatures quickly and evenly in the car.

FISHERIES: Fish, delicately flavored and highly perishable, must be kept continuously in ice until sold to the consumer. Tube-Ice helps preserve much of the catch here and abroad.

POULTRY PACKERS: Cylinder Tube-Ice is used to remove body heat, and in crushed form it completely surrounds each carcass in the shipping container. Both kinds of ice provide the greatest possible refrigerating effect to enhance poultry quality.

VEGETABLE AND FRUIT PACKERS: Lettuce, melons, carrots and other highly perishable produce are kept fresh and wholesome during long distance shipping and in storage by layers of crushed Tube-Ice.

BREWERIES: Cold water, for wort cooling, is made during the day by the Tube-Ice unit and ice, made during the off peak period, is stored in cold water tanks for maximum refrigeration economy in the modern brewery.

HOTELS, CLUBS, RESTAURANTS AND HOSPITALS: Tube-Ice is unequalled for maintaining the freshness and quality of foods and for beverage cooling in these institutions. Produced free of human contact, it meets all the sanitary requirements of health authorities.

REFRIGERATION CAR SERVICE: Carload shippers of perishable foods depend on Tube-Ice in the car bunkers and over the product to maintain proper refrigeration during the five to nine days refrigerator cars are usually in transit.

Henry Vogt Machine Co., Louisville 10, Ky.

Also makers of **Drop Forged Steel Valves, Fittings and Flanges • Steam Generators • Petroleum Refinery and Chemical Plant Equipment • Refrigeration Equipment — Since 1880**

FROZEN

Surging rise of consumer-prepared and packaged fish —fillets and steaks—marked the frozen fish business of the Pacific Coast in 1952.

Although the overall production was relatively conservative — slightly under 100 million pounds — as compared with the 1945 peak of 129 million — the fillet business, including steaks, rose far beyond its best previous peaks, even outstripping the war years.

Another difference: then the fillets went into bulk packs for the military. Today they go largely into consumer packages for the food market refrigerated cases.

CONSUMER goods, as exemplified in fillets and steaks, stole the show in the Pacific Coast frozen fish business in 1952, direct-from-producer reports to this *Yearbook* showing fillet-freezing during the year in the amount of 16,000,000 lbs., far higher than in any previous year, including the war years of heavy military demand. Buying for the Armed Services counted for a substantial part of the 1952 fillet pack, of course, but not in proportion comparable with 1945 to 1946.

Overall production of frozen fish in 1952 was on the conservative side, with 97.6 million pounds reported. This is down nearly a million from

1952-PACIFIC FROZEN SHELLFISH-1952

Company	Location	(Pounds)				
		Dungeness Crabmeat	King Crabmeat	Clams Shucked	Oysters Shucked	Total Shellfish
Booth Fisheries Corp.	Seattle	...	...	...	17,000	17,000
British Columbia Packers, Ltd.	All Stations	23,400	...	7,400	89,200	120,000
Canadian Fishing Co.	Vancouver	2,900	...	...	...	2,900
	Prince Rupert	1,190	...	...	...	1,190
Chase Fish Corporation	Seattle	1,800	...	1,200	560	3,560
Chase Seafood Co.	Seattle	1,200	...	...	...	1,200
Columbia River Packers Assn.	Astoria	780	...	...	...	780
Fisherman's Cooperative Federation*	Vancouver	4,553	...	147,444	65,000	216,997
Hallmark Fisheries	Coos Bay, Ore.	80,000	...	...	...	80,000
Kayler-Dahl Fish Co.	Petersburg	30,000	...	...	...	30,000
Ketchikan Cold Storage Co.	Ketchikan	160,656	...	...	...	160,656
Lazio Fish Co., Tom	Eureka, Calif.	28,000	...	...	...	28,000
McCallum-Legaz Fish Co., Inc.	Seattle	...	...	2,000	...	2,000
New England Fish Co.	Astoria	5,470	...	...	...	5,470
Parks Co., H. M.	Cordova	3,870	...	...	...	3,870
Petersburg Cold Storage Co.**	Petersburg	4,400	...	2,924	...	7,324
Portland Fish Co.	Portland	10,195	...	7,395	34,499	52,089
Wakefield's Deep Sea Trawlers, Inc.	"Deep Sea"-Bering Sea	...	359,892	...	...	359,892
Washington Fish & Oyster Co.	Seattle	2,756	...	296	28,755	31,807
Whiz Fish Products Co.	Seattle	35,000	...	5,000	75,000	115,000
Yaquina Bay Fish Co.	Newport	22,410	...	...	...	22,410
Total		418,580	359,892	173,659	310,014	1,262,145

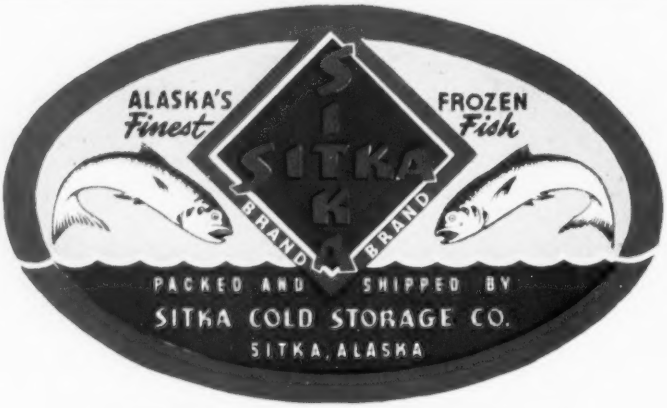
* Froze 7,501 lbs. shrimp at Vancouver, 114 lbs. at Prince Rupert.

**Froze 5,200 lbs. shrimp at Petersburg.

FILLET IMPORTS BY COUNTRIES

Year	(POUNDS)										
	Canada	Iceland	Denmark	Norway	England	Germany	Netherlands	Newfoundland*	Greenland	Miscellaneous	TOTAL
1946	38,950,523	4,720,618	2,150	1,756	47	...	...	5,899,856	...	14	49,574,964
1947	24,707,690	2,579,882	...	...	...	...	...	6,231,920	...	...	33,519,492
1948	49,140,150	4,181,204	9,352	395,109	...	...	...	...	...	40	54,277,438
1949	42,458,711	4,111,983	...	437,983	...	...	20,845	...	...	747,150	47,776,672
1950	50,192,442	13,061,922	580,123	2,085,184	74,123	14,091	13,206	...	239,100	4,413	66,264,604
1951	57,742,243	24,713,273	244,295	3,912,309	263,144	406,670	263,719	...	147,950	1,405	87,695,008
1952	51,148,983	35,374,266	2,351,976	9,835,249	1,593,857	1,457,111	1,322,267	...	132,900	50,201	103,266,690

*Newfoundland figures are included with Canada's, following its annexation by Canada in 1949.



Producers and Distributors of

"SITKA" BRAND FROZEN HALIBUT, SALMON AND SABLE FISH CAUGHT IN THE GLACIER CHILLED WATERS OF ALASKA BY AMERICAN FISHERMEN.

SITKA COLD STORAGE COMPANY

PLANT AND OFFICE
BOX 78
SITKA, ALASKA

SEATTLE ADDRESS
PIER 42 SOUTH
SEATTLE, WASHINGTON

"SEA HAVEN"

Fancy Dungeness Crab Meat

Tops in Quality!

Other "SEA HAVEN" Products Include: Fresh and Frozen Whole Shell Crabs, Fresh and Frozen Crabmeat, Albacore Tuna, Salmon, Smoked Oysters, Crab Legmeat and Smoked Crablegs.

KAAKINEN FISH COMPANY

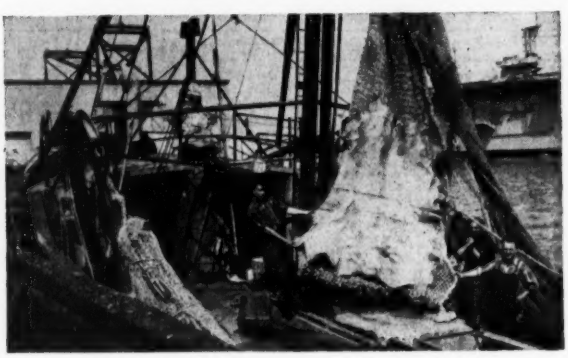
and PORT ORFORD FISH COMPANY

Westport, Wash.
Tel. 2781-2783

Canneries at
Westport, Washington
Port Orford, Oregon

WESCO COD-END PROTECTOR

Has Extra Toughness to Reduce Fish Loss From Hide Failure



Wesco Cod-End Protector on Boston Trawler "Bonnie"

The Wesco Cod-End Protector will outwear 10 to 15 cod ends. Proven in actual use for 3 years, it has given 8 to 14 months' service, outlasting 20 to 25 salted green hides. Made with uniform holes punched, ready to attach to your net.

WESTERBEKE FISHING GEAR CO.

HEADQUARTERS FOR FISHING EQUIPMENT AND MARINE HARDWARE

279 Northern Ave., Boston, Mass.

Branch Store and Warehouse at Gloucester

1952-PACIFIC FROZEN FISH-1952

Company	Cannery Location	(Pounds) Halibut	Salmon	Sablefish	Fillets	Miscellaneous	Total
ALASKA							
Alaska Fish & Farm Products	Anchorage	52,180	28,640	...	...	1,800	82,620
Alaska-Seldovia Packers, Inc.	Seldovia	673,803	...	...	...	...	673,803
Aleutian Cold Storage Co.	Sand Point	367,089	...	...	...	32,112	399,201
Booth Fisheries Corp.	Alaska	1,248,000	415,000	...	...	...	1,663,000
Juneau Cold Storage	Juneau	...	...	19,601	...	...	19,601
Kayler-Dahl Fish Co.	Petersburg	1,450,000	250,000	400,000	...	...	2,100,000
Ketchikan Cold Storage Co.	Ketchikan	775,468	...	...	...	49,472	824,940
McCallum-Legaz Fish Co.	Sitka	657,000	105,000	21,000	4,000	...	787,000
New England Fish Co.	S. E. Alaska	4,200,000	700,000	...	...	...	4,900,000
Oxenberg Bros.	Juneau	24,569	76,946	12,854	...	...	114,369
	Ketchikan	2,614	65,172	...	...	...	67,786
	Petersburg	...	...	58,800	...	...	58,800
	Wrangell	...	9,899	...	...	...	9,899
Pelican Cold Storage Co.	Pelican	1,577,425	554,110	53,436	...	118,457	2,303,428
Petersburg Cold Storage Co.	Petersburg	611,820	23,218	202,820	4,977	...	842,835
Phillips, E. C.	Ketchikan	1,500,000	310,000	20,000	...	...	1,830,000
San Juan Fish & Packing Co.	Ketchikan	7,043	190,559	...	...	1,619	199,221
	Sand Point	309,463	...	...	...	...	309,463
Sebastian-Stuart Fish Co.	Juneau	229,043	...	...	...	...	229,043
	Pelican	180,309	77,016	1,005	...	...	258,330
	Wrangell	...	8,000	...	...	...	8,000
Sitka Cold Storage Co.	Sitka	1,481,684	192,449	4,428	...	1,298	1,679,859
Vita Food Products, Inc.	Juneau	...	463,938	...	...	...	463,938
	Sitka	31,130	166,412	...	...	1,163	198,705
	Pelican	25,560	516,070	24,693	...	34	566,357
	Petersburg	...	146,203	169,883	...	...	316,086
	Wrangell	...	53,647	...	...	...	53,647
Washington Fish & Oyster Co.	Port Williams	640,000	...	...	...	...	640,000
Wrangell Cold Storage Co.	Wrangell	152,547	...	...	...	...	152,547
Whiz Fish Products Co.	Ketchikan	380,000	325,000	...	...	...	705,000
	Pelican	500,000	625,000	...	...	...	1,125,000
	Petersburg	265,000	25,000	...	...	...	290,000
Total Alaska		17,341,747	5,327,279	988,520	8,977	205,955	23,872,478
BRITISH COLUMBIA							
Booth Fisheries Co.	Prince Rupert	270,000	...	...	...	...	270,000
British Columbia Packers, Ltd.	All Stations	3,815,500	4,350,700	185,900	4,525,800	1,494,400	14,372,300
Canadian Fishing Co., Ltd.	Prince Rupert	2,299,483	916,090	73,197	585,146	...	3,873,916
	Butedale	972,536	304,190	105,223	...	15,434	1,397,383
	Vancouver	950,162	2,244,028	1,801	492,186	845,086	4,533,263
Fishermen's Cooperative Federation	Prince Rupert	3,010,778	3,185,454	335,328	1,015,202	136,198	7,682,960
	Vancouver	372,933	6,082,468	122,567	800,000	1,226,354	8,604,322
San Juan Fishing & Packing Co.	Prince Rupert (B.C.)	802,489	145,265	42,473	...	3,163	993,390
	Vancouver	498,706	123,608	17,280	...	...	639,594
Total British Columbia		12,992,587	17,351,803	883,769	7,418,334	3,720,635	42,367,128
PUGET SOUND							
Booth Fisheries Corp.	Seattle	1,067,000	604,000	38,000	118,000	59,000	1,886,000
Chase Fish Corp.	Seattle	145,039	35,314	1,500	905	...	182,758
Chase Seafood Co.	Everett	...	...	...	112,000	236,000	348,000
	Seattle	...	90,000	48,000	...	236,000	138,000
Eardley Fisheries Co.	Seattle	63,800	18,000	20,700	1,614,300	...	1,716,800
McCallum-Legaz Fish Co.	Seattle	425,000	73,000	110,000	...	...	608,000
New England Fish Co.	Seattle and Everett	1,500,000	1,000,000	100,000	...	...	2,600,000
Oxenberg Bros.	Seattle	...	23,983	169,640	...	...	193,623
San Juan Fishing & Packing Co.	Seattle	1,336,913	1,042,680	411,247	420,637	80,790	3,292,267
Sebastian-Stuart Fish Co.	Seattle	381,195	221,635	3,620	21,515	15,665	643,630
Washington Fish & Oyster Co.	Seattle	920,632	956,259	214,210	19,650	184,855	2,295,606
Whiz Fish Products Co.	Seattle	700,000	325,000	190,000	25,000	175,000	1,415,000
Miscellaneous	———	1,806,071	1,142,805	355,002	672,779	...	3,976,657
Total Puget Sound		8,345,650	5,532,676	1,661,919	3,004,786	751,310	19,296,341
COLUMBIA RIVER and OREGON							
Columbia River Packers Assn.	Newport	...	40,204	...	102,692	...	142,896
	Astoria	129,540	387,221	36,555	767,814	48,452	1,369,582
New England Fish Co.	Astoria and Kalama	40,000	220,000	36,000	1,500,000	...	1,796,000
Portland Fish Co.	Portland	37,660	98,273	1,185	10,180	53,615	200,913
Sebastian-Stuart Fish Co.	Astoria	...	...	38,765	847,075	...	885,840
Union Fishermen's Co-Op. Packing Co.	Astoria	12,023	142,589	7,665	...	34,017	196,294
Yaquina Bay Fish Co.	Newport	...	269,197	45,902	600,000	...	915,099
Total Oregon		219,223	1,157,484	166,072	3,827,761	136,084	5,506,624
Total California		8,676	448,647	72,671	1,907,142	4,134,131	6,571,267
Grand Total		38,907,883	29,817,889	3,772,951	16,167,000	8,948,115	97,613,838

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the year before, and a full million from 1950.

Basic reason for this rather unfavorable comparison in total volume can be found in the large increase reported in fillets and steaks. It boils down to this:

A million pounds of frozen fillets feeds as many consumers as 2 million pounds of whole frozen fish, and represents at least twice as much gross weight of fish as the net weight of fillets.

Diversion to Packaging Evident in Statistics

Diversion of halibut and salmon to the consumer package is plainly evident in the reduced quantities frozen. This is particularly true of halibut, although the difficulties in marketing the last of the 1951 pack in the spring of 1952 may have served to limit the freezers' enthusiasm a little with respect to halibut.

Despite diversion to packages, the salmon pack for 1952 was close to recent years, in large degree because of the exceptionally good fall Silver production in Oregon, Washington and Southern British Columbia waters. The trollers and inside fishermen as well took a large catch of very fine Silvers; where Alaska production of this species was on the disappointing side.

1952-CALIFORNIA FISH FREEZINGS-1952

(Pounds)

Species	Nov. 1951	Dec. 1951	Jan. 1952	Feb.	March	April	May	June	July	August	Sept.	Oct.	Total
Bait & Animal Food	105,969	2,525	17,216	29,185	31,134	49,837	47,251	68,427	149,296	221,360	160,000	162,840	1,045,040
Fillets:													
Flounder (Incl.Sole)	73	309	...	7,024	...	2,481	3,816	5,915	2,747	3,085	1,266	3,505	30,221
Lingcod	...	...	...	...	227	1,105	551	...	...	...	...	...	1,883
Cod	569	...	4,195	5,660	1,940	1,930	2,342	...	15,759	6,904	5,331	450	45,080
Other Fillets	1,733	4,228	2,661	...	3,784	3,724	299,139	352,995	265,940	251,098	295,000	240,553	1,720,855
Cod, etc.	1,225	...	3,010	...	7,385	677	...	...	4,436	1,675	2,781	2,310	23,499
Flounder, etc.	4,351	897	...	627	2,910	3,530	518	8,070	5,850	...	...	...	26,753
Herring, Sea	...	...	...	...	...	...	...	...	5,984	8,492	43,456	...	57,932
Halibut	410	...	...	...	...	...	...	...	7,404	1,272	...	...	9,086
Mackerel	18,100	1,480	2,140	25,098	...	74,722	19,675	12,067	9,644	25,468	40,217	27,435	256,046
Sablefish	90	...	...	...	...	...	...	17,025	18,103	10,187	11,309	16,200	72,914
Salmon:													
King or Chinook	...	...	...	...	...	...	1,662	42,231	111,001	150,331	19,922	...	325,147
Silver or Coho	840	...	...	...	...	...	...	...	58,929	...	1,046	...	60,815
Unclassified	846	...	...	...	...	...	2,748	...	33,655	16,835	34,559	3,929	92,572
Sea Bass	...	...	...	...	...	...	...	...	13,095	7,637	246	...	20,978
Smelt	50	1,940	860	1,150	360	...	1,452	5,852	...	...	...	...	11,664
Swordfish	...	...	...	...	...	...	...	5,001	24,828	6,207	418	2,069	38,523
Tuna	9,684	...	...	...	...	...	...	2,482	89,794	48,303	52,794	92,616	295,673
Unclassified	350,057	225,146	263,417	261,130	251,675	373,670	262,165	259,402	369,475	196,344	181,016	62,791	3,056,288
Shad, Incl. Shad Roe	...	...	...	...	...	155	1,502	...	...	...	...	...	1,657
Total	493,997	236,525	293,499	329,874	299,415	511,831	642,821	779,467	1,185,940	955,198	849,361	614,698	7,192,626

1952-EUREKA AREA FRESH FISH LANDINGS-1952

(Pounds)

SPECIES	Nov. '51	Dec. '51	Jan. '52	Feb.	March	April	May	June	July	August	Sept.	Oct.	TOTAL
Flounder	44,300	27,300	14,200	8,800	1,700	...	...	5,200	12,200	6,200	8,100	4,800	132,800
Halibut	...	...	...	...	...	...	200	18,600	26,900	14,400	...	...	60,100
Herring	...	8,000	45,900	...	...	...	...	...	...	...	...	100	54,000
Lingcod	14,700	6,500	1,700	11,300	8,200	6,500	10,200	23,700	7,300	15,300	12,900	17,100	135,400
Perch	100	...	100	...	100	6,700	700	...	500	400	100	...	8,700
Rockfish	44,300	42,500	28,900	185,700	56,400	48,300	49,500	50,400	28,500	36,600	41,300	28,200	640,600
Sablefish	42,200	16,300	400	500	2,100	11,700	18,800	22,300	7,000	9,900	13,200	6,900	151,300
Sand Dabs	3,500	800	21,000	6,800	3,200	1,000	2,800	3,000	5,400	4,000	2,400	3,000	56,900
Sole:													
Dover	351,400	150,700	15,200	5,700	19,700	273,200	700,400	899,500	615,100	593,500	562,500	343,300	4,530,200
English	106,900	55,800	55,500	144,300	49,900	60,500	50,600	21,000	36,500	25,500	31,500	38,000	676,000
French	2,900	1,200	3,300	6,700	14,600	16,100	9,600	...	...	...	...	...	54,400
Petrale	82,200	96,000	44,600	63,000	35,900	35,500	33,100	15,500	18,000	30,800	19,800	43,000	517,400
Rex	19,200	25,500	13,200	36,400	8,600	10,800	15,300	7,400	2,600	23,900	17,500	14,400	194,800
Sand	400	100	1,200	300	...	...	...	...	...	...	...	800	2,800
Arrowtooth	300	...	...	1,900	1,700	400	...	9,000	8,700	2,200	100	400	24,700
Salmon	...	...	...	...	...	...	18,550	102,800	133,900	205,100	137,600	18,200	616,150
Tuna: Albacore	3,900	...	...	...	...	...	...	...	...	39,400	476,500	449,800	969,600
Crabs	3,300	423,300	771,600	727,200	541,100	589,700	388,900	79,000	8,900	900	...	...	3,533,900
Whitebait	...	...	500	400	3,200	2,900	1,600	2,600	700	100	400	...	12,400
Miscellaneous	200	1,200	...	...	1,200	1,500	...	900	400	100	1,200	700	7,400
Total	719,800	855,200	1,017,300	1,199,000	747,600	1,064,800	1,300,250	1,260,900	912,600	1,008,300	1,325,100	968,700	12,379,550

Landings of Food Fish by the Otter Trawl Fleet at Seattle

YEAR	SOLE AND FLOUNDERS				Halibut	True Cod	Lingcod	Sablefish	Rockfish	Miscellaneous	TOTAL
	English Sole	Petrale Sole	Other Sole, Flounders, etc.	TOTAL							
1942	6,464,323	535,981	696,129	7,696,433	200,726	547,422	2,698,605	280,232	1,049,269	2,894	12,475,581
1943	1,573,683	5,128,222	3,238,493	9,940,398	371,044	587,816	4,141,374	708,607	3,279,122	26,839	19,055,200
1944	793,910	4,395,513	174,242	5,363,665	...	370,696	3,770,160	949,742	4,356,659	23,085	14,834,230
1945	805,134	4,701,704	436,653	5,943,591	...	1,697,462	3,319,058	231,367	12,940,910	...	24,132,388
1946	1,925,867	3,513,573	120,669	5,560,109	...	1,733,868	1,976,631	514,852	6,104,157	21,626	15,911,243
1947	1,429,125	2,636,464	382,815	4,448,404	...	975,852	1,628,928	385,639	3,197,306	50,176	10,686,315
1948	2,879,316	3,724,386	691,999	7,295,701	...	2,185,854	2,537,301	223,651	6,416,604	240,909	18,900,020
1949	2,581,584	2,959,506	102,817	5,643,907	...	1,882,427	1,655,878	243,243	8,013,142	4,189	17,442,786
1950	1,863,363	2,600,585	296,075	4,760,023	...	1,868,564	1,332,065	604,954	7,770,352	11,489	16,347,447
1951	2,530,910	2,097,030	875,914	5,503,854	...	3,293,315	1,049,306	665,493	6,312,702	...	16,824,670
1952	2,107,244	1,945,417	1,876,145	5,937,404	...	3,859,212	1,078,939	441,317	5,119,868	...	16,436,740

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Frozen Fish Marketing Steady in Late 1952

Marketing of the 1952 frozen fish pack from the Pacific Coast was entirely satisfactory during the portion of the selling season ending with 1952.

Halibut prices, as this was written just before New Year's Day, were holding firm at opening figures. While it is natural that there was some slight variation up-and-down with individual sellers, the following may be taken as representative of the market prices on 1952 frozen halibut, first quality, f.o.b. in car lots, Pacific Coast, from the end of fishing to Dec. 31, 1952:

PACIFIC FROZEN FISH

DISTRICT & YEAR	Halibut Pounds	Salmon Pounds	Fillets Pounds	Sablefish Pounds	Miscellaneous Pounds	TOTALS & Years	DISTRICT & YEAR
1946						1946	1946
Alaska	14,966,616	12,036,956	30,000	4,519,989	2,075,530	33,629,091	Alaska
British Columbia	12,782,294	14,384,544	1,972,000	1,778,855	11,486,110	42,403,803	British Columbia
Puget Sound & Wash. Coast	8,050,947	6,388,388	3,895,400	1,714,185	2,807,240	22,856,160	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	555,884	4,373,849	4,511,986	416,003	3,147,126	13,004,848	Columbia Riv.& Ore. Coast
California	585,807	852,370	252,064	182,810	3,394,719	5,267,770	California
TOTAL, 1946	36,941,548	38,036,107	10,661,450	8,611,842	22,910,725	117,161,672	TOTAL, 1946
1947						1947	1947
Alaska	20,638,301	10,197,755	4,597	886,535	383,473	32,110,661	Alaska
British Columbia	14,930,795	13,583,850	1,057,828	729,492	6,357,106	36,659,071	British Columbia
Puget Sound & Wash. Coast	4,933,377	4,241,310	1,658,152	921,204	1,004,330	12,758,373	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	618,266	1,272,508	1,681,488	60,786	985,697	4,618,745	Columbia Riv.& Ore. Coast
California	1,173,863	632,681	52,876	35,895	3,930,147	5,825,462	California
TOTAL, 1947	42,294,602	29,928,104	4,454,941	2,633,912	12,660,753	91,972,312	TOTAL, 1947
1948						1948	1948
Alaska	26,020,134	9,582,232	165,370	5,065,056	5,290	40,838,082	Alaska
British Columbia	11,512,287	15,209,533	1,650,856	1,651,028	4,210,412	34,234,116	British Columbia
Puget Sound & Wash. Coast	7,152,574	4,355,399	2,393,487	1,519,514	797,882	16,218,856	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	410,091	1,187,802	4,241,705	329,857	. . . .	6,169,455	Columbia Riv.& Ore. Coast
California	3,365	41,200	168,167	4,834	1,728,963	1,946,429	California
TOTAL, 1948	45,098,451	30,376,166	8,619,585	8,570,289	6,742,547	99,407,038	TOTAL, 1948
1949						1949	1949
Alaska	20,914,221	12,222,337	1,309	3,772,851	271,901	37,182,619	Alaska
British Columbia	12,629,300	19,584,100	3,480,500	1,967,500	6,946,700	44,608,100	British Columbia
Puget Sound & Wash. Coast	7,535,497	5,123,763	1,192,440	1,846,314	1,088,490	16,786,504	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	324,527	458,280	2,567,863	289,205	121,994	3,761,869	Columbia Riv.& Ore. Coast
California	5,912	124,301	790,780	6,547	3,083,428	4,010,968	California
TOTAL, 1949	41,409,457	37,512,781	8,032,892	7,882,417	11,512,513	106,350,060	TOTAL, 1949
1950						1950	1950
Alaska	25,625,940	8,467,426	5,113	566,965	98,409	34,763,853	Alaska
British Columbia	15,081,000	23,425,000	701,789	271,848	5,393,954	44,873,591	British Columbia
Puget Sound & Wash. Coast	6,270,705	4,706,925	1,166,019	1,547,807	5,226,430	18,917,886	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	417,651	483,068	3,383,682	63,081	333,117	4,679,599	Columbia Riv.& Ore. Coast
California	60,000	147,753	1,897,253	57,125	2,646,797	4,754,928	California
TOTAL, 1950	47,401,296	37,230,172	7,152,856	2,506,826	13,698,707	107,989,857	TOTAL, 1950
1951						1951	1951
Alaska	19,577,948	8,780,110	6,988	3,241,556	820,473	32,427,075	Alaska
British Columbia	13,358,332	16,000,909	2,292,931	1,050,718	7,492,483	40,195,373	British Columbia
Puget Sound & Wash. Coast	7,789,536	4,314,516	2,119,910	1,791,000	2,275,577	18,290,539	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	291,936	735,305	3,199,153	189,694	124,761	4,540,849	Columbia Riv.& Ore. Coast
California	14,690	172,706	253,169	8,445	2,503,039	2,952,049	California
TOTAL, 1951	41,032,442	30,003,546	7,872,151	6,281,413	13,216,333	98,405,885	TOTAL, 1951
1952						1952	1952
Alaska	17,341,747	5,327,279	8,977	988,520	205,955	23,872,478	Alaska
British Columbia	12,992,587	17,351,803	7,418,334	883,769	3,720,635	42,367,128	British Columbia
Puget Sound & Wash. Coast	8,345,650	5,532,676	3,004,786	1,661,919	751,310	19,296,341	Puget Sound & Wash. Coast
Columbia Riv. & Ore. Coast	219,223	1,157,484	3,827,761	166,072	136,084	5,506,624	Columbia Riv.& Ore. Coast
California	8,676	448,647	1,907,142	72,671	4,134,131	6,571,267	California
TOTAL, 1952	38,907,883	29,817,889	16,167,000	3,772,951	8,948,115	97,613,838	TOTAL, 1952

NOTE: — Since 1942 Steelheads have been combined with salmon. Figures given in this column cover the quantities of frozen fillets of all varieties of fish reported. British Columbia figures include only amounts directly reported by owners of the fish and do not include unreported quantities in custom freezers.

SALMON FREEZING IN CANADA BY MONTHS

Year	(Pounds)												
	Jan.	Feb.	March	April	May	June	July	August	September	October	November	December	TOTAL
1943	42,410	76,821	1,722	1,410	46,691	579,333	1,289,797	1,842,880	3,306,198	4,693,989	2,738,670	194,089	14,814,010
1944	190,468	366,346	199,226	34,334	35,166	799,534	1,736,542	2,902,804	3,602,202	3,489,092	490,764	216,862	14,063,340
1945	419,230	35,244	360,661	19,945	158,305	822,475	822,475	3,789,008	4,164,479	4,264,479	1,313,675	401,122	16,731,098
1946	18,904	520,509	902,032	43,216	114,952	1,213,867	2,131,929	3,096,060	3,709,790	6,134,139	3,262,982	421,969	21,573,149
1947	271,572	221,343	270,066	41,620	342,709	921,265	2,328,428	2,659,952	2,628,493	6,477,323	1,873,407	48,000	18,084,178
1948	443,000	147,000	7,000	15,000	243,000	1,498,000	2,237,000	2,626,000	2,771,000	10,387,000	2,009,000	291,000	22,674,000
1949	157,000	22,000	33,000	107,000	242,000	1,935,000	2,961,000	4,565,000	3,917,000	7,362,000	1,463,000	24,000	22,788,000
1950	4,000	22,000	22,000	5,000	227,000	1,224,000	2,462,000	5,246,000	8,678,000	7,149,000	702,000	8,000	25,749,000
1951	25,000	72,000	2,000	11,000	229,000	1,114,000	2,677,000	4,329,000	4,690,000	6,989,000	1,311,000	16,000	21,465,000
1952	10,000	29,000	99,000	80,000	379,000	1,804,000	3,126,000	5,113,000	3,010,000	2,151,000	(1)	(1)	15,801,000

(1) Data not available.
NOTE: — All figures in accordance with latest reports. Source: Dominion Bureau of Statistics, Department of Trade and Commerce.

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Shad Roe — Fresh & Frozen Crab Meat
Albacore Tuna — Smoked Salmon
Salmon Steaks — Seafood Cocktail Sauce

Brokers Solicited

1952-San Pedro-Santa Monica Area Fresh Fish Landings-1952

SPECIES	POUNDS												
	Nov. 1951	Dec. 1951	Jan. 1952	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	TOTAL
Anchovy	22,178	...	...	...	316	18,482	8,330	7,400	4,875	2,460	2,434	5,073	71,548
Barracuda	129,263	94,712	89,541	142,606	186,662	140,320	288,023	141,513	29,460	127,914	115,844	41,688	1,527,546
Cabrilla	11,866	29,571	49,513	42,836	83,677	70,379	3,797	24,085	40,999	...	...	...	356,723
Grouper	35,646	105,661	94,603	112,977	68,545	38,314	8,080	11,484	27,915	...	581	425	504,231
California Halibut	549	480	2,218	35,799	38,139	34,514	17,419	8,563	6,446	15,571	6,448	734	166,880
Flying Fish	...	...	...	...	...	...	2,455	869	9,358	840	1,081	...	14,403
Jack Mackerel	25,795	9,335	28,222	103,816	224,302	124,296	54,751	17,525	9,053	57,578	104,414	74,597	833,684
Kingfish	11,345	3,412	4,598	24,466	19,415	30,454	15,673	19,752	16,811	8,504	26,699	24,041	205,170
Mackerel	64,271	19,736	19,450	19,532	17,693	43,935	81,442	61,398	69,874	68,914	65,914	59,644	591,803
Perch	4,838	7,821	3,193	4,587	4,974	2,649	1,498	458	761	2,754	3,463	4,087	41,083
Pilchard	38,700	22,879	52,742	226,572	199,465	356,802	369,063	122,310	291,325	408,605	172,385	130,753	2,391,601
Pompano	4,159	14	4	502	244	1,394	4,139	999	414	613	320	344	13,146
Rock Bass	10,181	8,772	7,358	24,303	...	945	379	6,400	2,949	1,812	1,724	4,693	69,516
Rockfish	29,350	39,625	68,819	34,353	20,255	59,327	9,184	12,218	4,894	8,591	12,553	16,432	315,601
Sablefish	1,245	487	641	290	...	...	...	...	...	64	...	...	2,727
Sand Dabs	275	187	1,555	717	162	96	64	48	33	...	...	...	3,137
Sculpin	3,931	387	55	2,516	1,371	3,691	1,596	7,679	7,817	7,304	6,254	1,638	44,239
Sea Bass: Black	25,090	17,719	11,904	14,202	7,349	15,376	13,801	13,936	16,677	265	2,851	66,584	205,754
White	...	...	239	19,548	3,690	26,802	91,763	61,797	81,457	101,412	60,181	31,960	478,849
Shark	4,515	7,801	4,108	3,704	4,077	5,899	14,030	9,915	2,723	3,330	2,400	2,249	64,751
Sheepshead	1,078	744	245	127	...	...	133	162	681	144	...	...	3,314
Skate	70	230	345	404	575	905	...	...	...	...	240	14	2,783
Smelt	6,032	6,922	18,997	6,455	5,097	1,731	410	1,403	1,125	2,198	2,304	3,497	56,171
Swordfish	...	...	...	...	...	...	854	...	2,505	26,275	20,696	22,724	73,054
Tuna: Albacore	16,376	3,865	...	...	...	...	...	373	44,775	76,288	25,307	28,232	195,216
Bonito	2,930	1,865	563	1,067	200	2,249	218	204	28	200	1,238	3,425	14,185
Bluefin	40,732	...	150	...	...	...	14	15,773	142,951	37,322	23,328	...	260,270
Skipjack	...	10	22	...	...	...	...	...	5,843	...	...	...	5,875
Yellowfin	...	1,539	...	...	16,820	28,499	19,730	42,570	...	...	...	...	109,158
Yellowtail	36,419	49,705	1,208	32,144	4,891	31,360	19,253	11,073	...	1,710	13,983	25,951	227,697
Abalone	600	1,475	550	...	750	1,125	1,317	300	444	...	...	...	6,561
Spiny Lobster	54,888	19,826	8,261	18,781	5,659	...	...	...	300	...	...	33,815	141,540
Squid	9,740	...	...	555	...	...	...	...	...	3,110	2,320	18,229	33,954
Miscellaneous	159,271	2,349	2,364	3,534	588	3,427	16,606	4,765	218	1,776	2,057	2,138	199,083
Total	751,333	457,129	471,468	876,393	914,916	1,042,971	1,044,020	604,772	822,711	865,554	677,019	602,967	9,231,253

Grade	Per lb.
Chix	24c
10-to-20	26c
20-to-40	27c
40-to-60	28c
60-to-80	29c
Whales	29c

At that time the price was steady, the signs of shortage already showing in some sizes. At the prices prevailing, principal dealers anticipated a sell-out before new fish could become available after the opening of the 1953 season, May 14.

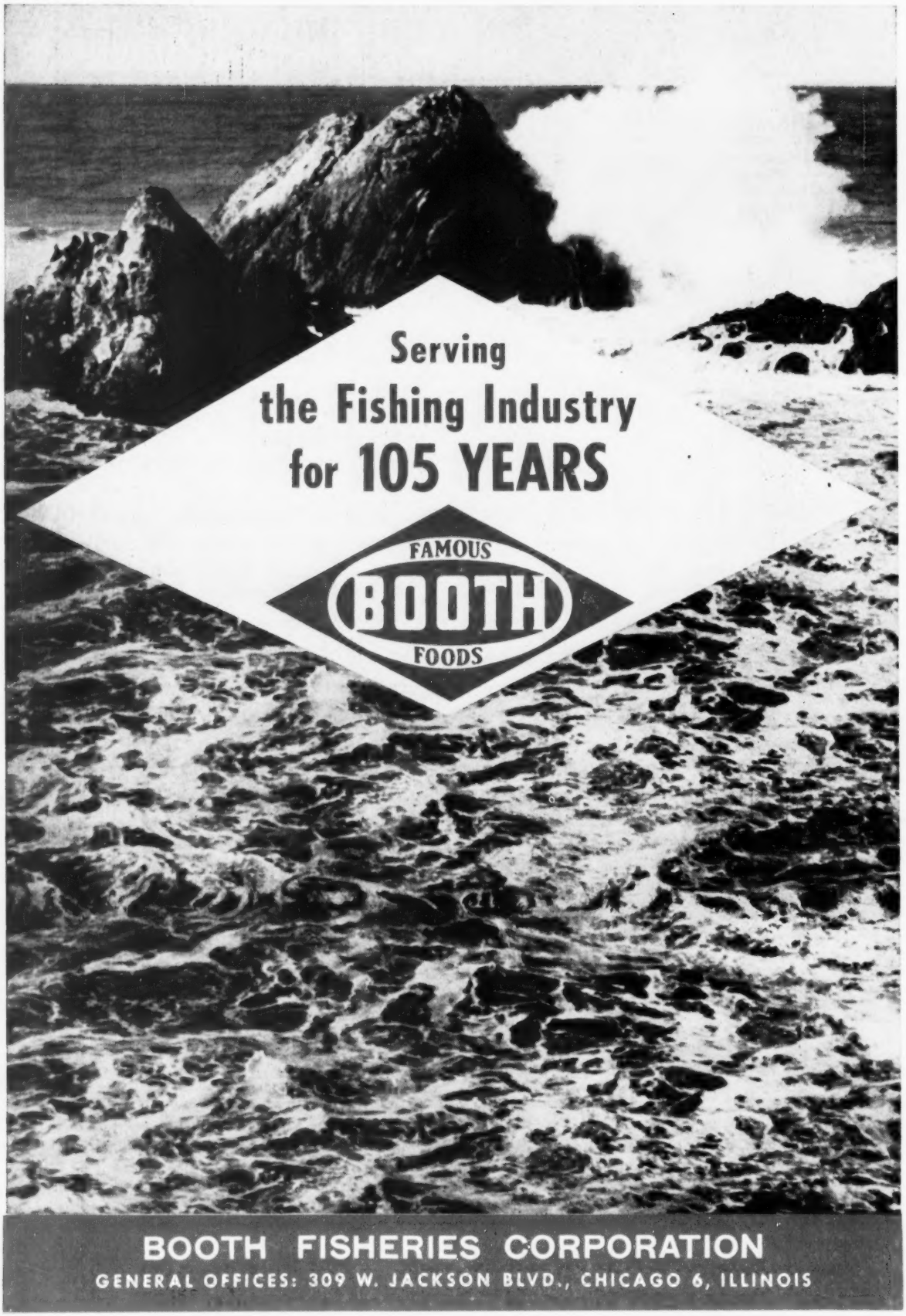
Prime Silver Salmon Priced on Bargain Basis

The substantial pack of very fine Silvers put up in 1952 were priced for market at something of a bargain,

PLANTINGS OF IMPORTED PACIFIC OYSTER SEED

YEAR	WASHINGTON				OREGON			California	British Columbia	TOTAL	Year
	Willapa Harbor	Grays Harbor	North Puget Sound	South Puget Sound	Coos Bay	Yaquina and Alsea	Tillamook				
1947	22,933	5,230	6,025	4,117	8,200	...	7,157	750	(a)2,292	56,704	1947
1948	14,685	1,150	5,562	1,962	3,400	1,550	1,005	850	2,675	32,839	1948
1949	17,357	7,425	6,429	4,748	290	1,930	2,500	350	4,844	45,873	1949
1950	16,512	1,550	6,830	5,745	4,425	1,300	3,575	565	5,204	45,706	1950
1951	18,569	2,250	8,685	7,119	6,749	1,500	1,274	350	(b)5,404	51,900	1951
1952	40,864	4,001	14,345	9,562	7,162	71	3,290	350	(c) 3,584	83,229	1952

(a) Includes 100 cases planted in Alaska. (b) Includes 4 cases planted in Alaska. (c) Includes 7 cases planted in Alaska.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for 105 YEARS
FAMOUS
BOOTH
FOODS
BOOTH FISHERIES CORPORATION
GENERAL OFFICES: 309 W. JACKSON BLVD., CHICAGO 6, ILLINOIS

32c per lb. f.o.b. Coast in cars, against a 42c figure on a similar basis a year previous. While it was not to be expected that major salmon selling would get under way until after the first of the year, important freezers on the Pacific Coast reported that the 32c price had stimulated substantial early orders as the forward-looking elements in the trade moved to assure themselves of protection at this interesting price.

Sliced Steaks Stand-Out Among New Frozen Items

Steaks sliced from unfrozen salmon and halibut, packed in even-weight consumer cartons, wrapped and then pressure-frozen can be accorded position as the No. 1 new item of 1952—a year that saw a number of innovations and product improvements.

Monthly Landings of Food Fish by the Otter Trawl Fleet at Seattle

(Statistics, compiled by U S Fish and Wildlife Service, are in terms of pounds).

Month	"Sole and Flounders"				True Cod	Lingcod	Sablefish	Rockfish	Miscellaneous	Total
	English Sole	Petrale Sole	Unclassified Flatfish	Total						
1949										1949
January	563,946	30,625	1,260	595,831	142,276	50,448	31,025	1,229,125	2,604	2,051,309
February	444,863	150,415	4,575	599,853	170,230	53,617	...	414,017	...	1,237,717
March	571,545	160,765	1,774	734,084	207,505	94,671	15	1,151,826	...	2,188,101
April	259,175	268,791	3,205	531,171	129,435	8,800	1,837	979,080	...	1,650,323
May	61,665	564,939	2,010	628,614	166,210	314,641	2,897	540,567	...	1,652,929
June	36,880	189,755	215	226,850	66,634	136,699	42,321	826,923	...	1,299,427
July	10,460	244,852	...	255,312	75,181	254,902	46,955	479,360	...	1,111,710
August	177,497	471,831	11,839	661,167	178,690	257,940	34,171	422,047	...	1,554,015
September	125,509	453,951	19,127	598,587	271,256	315,130	35,292	599,082	...	1,819,347
October	149,721	223,352	51,525	424,598	306,304	104,718	25,400	410,247	...	1,271,267
November	148,465	163,670	4,905	317,040	104,979	42,416	21,950	515,395	...	1,001,780
December	31,858	36,560	2,382	70,800	63,727	21,896	1,380	445,473	1,585	604,861
Total	2,581,584	2,959,506	102,817	5,643,907	1,882,427	1,655,878	243,243	8,013,142	4,189	17,442,786
1950										1950
January	76,295	160,810	1,355	238,460	109,405	63,210	...	575,655	...	986,730
February	189,805	116,360	7,470	313,635	140,785	55,720	...	1,153,070	1,515	1,664,725
March	353,595	105,735	765	460,095	157,518	37,617	...	906,369	...	1,561,599
April	395,869	191,925	1,155	588,949	119,580	65,975	...	665,229	412	1,440,145
May	169,055	621,479	4,755	795,289	243,490	188,950	12,753	644,594	851	1,885,927
June	353,794	413,095	15,705	782,594	119,040	326,758	...	643,773	240	1,872,405
July	62,445	139,710	7,255	209,410	64,350	84,417	3,720	438,804	235	800,936
August	55,170	97,200	153,765	306,135	185,646	184,395	32,847	541,329	351	1,250,703
September	59,775	128,741	15,335	203,851	220,655	133,850	359,760	562,509	...	1,480,625
October	43,220	304,330	7,960	355,510	201,028	121,118	158,254	721,121	1,495	1,558,526
November	60,205	229,660	12,685	302,550	226,760	9,665	32,740	707,231	...	1,278,946
December	104,750	214,810	29,545	349,105	155,568	100,576	550	487,881	837	1,094,517
Total	1,923,978	2,723,855	257,750	4,905,583	1,943,825	1,372,251	600,624	8,047,565	5,936	16,875,784
1951										1951
January	62,462	69,485	1,617	133,564	127,030	15,504	...	206,731	...	482,829
February	442,580	113,525	19,015	575,120	341,346	101,488	...	1,156,972	...	2,174,926
March	369,536	145,289	5,972	520,797	237,570	67,751	...	625,005	...	1,451,123
April	471,730	299,108	2,065	772,903	208,497	166,830	184	770,325	...	1,918,739
May	282,117	339,920	12,089	634,126	249,549	202,633	632	521,896	...	1,608,836
June	81,549	170,663	20,771	272,983	197,555	83,410	1,018	377,247	...	932,213
July	35,335	77,000	24,075	136,410	309,275	53,760	32,202	272,651	...	804,298
August	336,604	126,125	76,845	539,574	307,140	116,777	144,718	357,451	...	1,465,660
September	112,987	219,073	176,530	508,590	298,250	74,121	198,414	538,493	...	1,617,868
October	142,583	186,952	187,074	516,609	376,575	71,483	188,589	532,805	...	1,686,061
November	127,412	255,795	210,824	594,031	368,423	70,745	79,751	518,398	...	1,631,348
December	66,015	94,095	139,037	299,147	272,105	24,804	19,985	434,728	...	1,050,769
Total	2,530,910	2,097,030	875,914	5,503,854	3,293,315	1,049,306	665,493	6,312,702	...	16,824,670
1952										
January	101,904	35,210	48,031	185,145	225,301	31,923	...	476,900	...	919,269
February	457,628	40,406	321,242	819,276	251,207	86,341	...	604,159	...	1,760,983
March	289,208	100,307	88,789	478,304	489,578	125,769	...	643,485	...	1,737,136
April	296,543	224,655	64,497	585,695	477,136	119,302	...	714,576	...	1,896,709
May	275,975	287,043	136,857	699,875	449,622	157,427	661	631,242	...	1,938,827
June	176,545	204,845	136,835	518,225	289,144	144,531	12,334	231,744	...	1,195,978
July	118,410	187,305	228,175	533,890	319,242	104,326	29,138	184,651	...	1,171,247
August	53,220	146,825	250,740	450,785	296,062	55,125	48,671	292,164	...	1,142,807
September	37,395	196,991	219,314	453,700	400,172	83,072	123,911	444,660	...	1,505,515
October	65,850	390,064	168,285	624,199	329,339	86,962	205,843	404,012	...	1,650,355
November	53,999	81,642	48,180	183,821	172,633	48,380	18,545	156,171	...	579,550
December	180,567	50,124	173,798	404,489	159,776	35,781	2,214	336,104	...	938,364
Total	2,107,244	1,945,417	1,884,743	5,937,404	3,859,212	1,078,939	441,317	5,119,868	...	16,436,740

OREGON OTTER TRAWL LANDINGS

YEAR	SOLE				Flounders	"Turbot"	"Cod" Miscel.	Lingcod	Rockfish	Ocean Perch	TOTAL
	Petrale	English	Dover	Other							
1952	1,515,248	1,884,510	7,136,035	1,091,144	205,511	...	377,967	499,969	3,502,878	4,095,141	20,308,403 *
1951	2,052,366	2,420,333	8,227,444	859,820	351,001	...	672,656	887,187	1,659,212	3,524,208	20,654,227
1950	3,151,833	2,399,103	6,306,144	392,775	355,125	...	349,660	649,719	4,018,991	Dogfish	17,623,350
1949	1,514,762	1,092,493	3,003,574	299,785	272,042	1,723,963	4,821	728,464	3,307,595	591,842	12,539,341
1948	2,605,460	3,266,422	2,802,181	272,878	1,428,660	1,219,208	29,083	798,952	3,890,003	338,739	16,651,586
1947	1,443,936	1,883,438	2,031,905	139,791	667,347	723,497	30,194	569,226	4,637,594	92,344	11,688,763
1946	2,984,092	3,950,609	3,197,988	132,136	1,279,839	297,708	260,574	1,150,803	10,671,012	31,310	23,956,071
1945	1,574,143	1,096,601	2,704,216	238,507	1,024,288	168,811	412,731	1,015,215	17,365,866	40,554	25,640,932
1944	2,019,148	1,057,701	1,593,469	254,400	877,048	700,147	594,810	1,208,051	11,266,874	398,836	19,970,484
1943	3,805,094	898,639	6,431,666	2,239,125	858,051	2,831,013	32,731	934,878	6,762,494	1,601,368	26,395,059
1942	3,745,236	227,783	2,308,308	1,671,162	443,840	71,137	47,255	989,142	1,728,299	1,086,242	12,318,404

*January thru October

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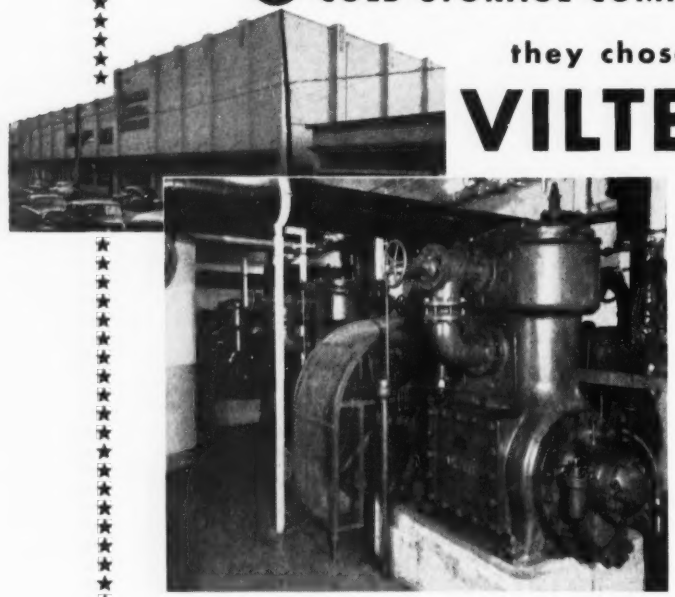

● Founded in 1901, the Juneau Cold Storage Company of Juneau, Alaska, has had a record of steady growth. Their latest addition raised capacity to 9,000,000 pounds of frozen fish storage. Juneau can freeze 100 tons of fish every 24 hours, and produce 25 tons of ice in the same period. 7,000,000 pounds of salmon and halibut are handled by Juneau Cold Storage each year.

When Juneau enlarged in 1944, the record of a 7½ x 7½ Vilter compressor installed there in 1923 helped them decide. New Vilter equipment added then and later includes three 13¼ x 10½ boosters, one 11½ x 10½, and one 6½ x 6½ compressor, eight unit coolers, plus liquid pumps, accumulators, condensers, and receivers. At Juneau, they *know* that they can depend on Vilter.

Around the world, the fishing industry—as well as almost every other type of food processor—is turning more and more to Vilter. With Vilter they get engineering help that knows their problems. And with Vilter they get refrigeration equipment that costs less to operate and maintain—equipment they *know* is dependable.

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This item, which was introduced in the fall of 1952 by the New England Fish Co. and the Columbia River Packers Association, has proven decidedly interesting. Advantages include greater recovery; compact packages; exact and even weights; pressure freezing with air excluded.

Another totally different kind of "steak" consists of rounds cut from a frozen cylinder formed of fillets of fish compacted and frozen in a cylindrical mold.

Frozen Shellfish Notable Among Innovations of 1952

Shellfish items held important position among new and improved frozen products of the Pacific fisheries in 1952.

1952 - ALASKA CUSTOM COLD STORAGE FREEZINGS - 1952

Company	Location	(Pounds)						
		Halibut	Salmon	Sablefish	Fillets	Miscellaneous	Grand Total
Alaska Fish and Farm Products	Anchorage	52,180	28,640	...	...	1,800	82,620
Aleutian Cold Storage Co.	Sand Point	976,552	...	...	...	32,112	1,008,664
Juneau Cold Storage Co.	Juneau	249,883	76,976	32,455	...	...	359,314
Ketchikan Cold Storage Co.	Ketchikan	2,885,125	835,834	2,336	...	51,091	3,754,386
Pelican Cold Storage Co.	Pelican City	2,833,294	2,187,196	79,134	...	118,491	5,218,115
Petersburg Cold Storage Co.	Petersburg	1,774,820	194,421	431,503	...	4,972	2,405,716
Sitka Cold Storage Co.	Sitka	2,169,814	463,961	25,428	1,264	2,461	2,662,828
Wrangell Cold Storage Co.	Wrangell	152,547	...	...	...	...	152,547
TOTAL		11,074,215	3,786,928	570,856	1,264	210,927	15,644,190

1952-Coastwise Receipts at Seattle from Alaska-1952

Pounds

SPECIES	Dec. '51	Jan. '52	February	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.	NOV.	12 Months Total	Total 1951
Dolly Varden Trout, frozen	...	...	...	...	...	19,438	151	...	...	...	515	271	14,375	19,806
Halibut	...	...	...	...	...	15,836	...	...	...	...	...	...	15,836	54,506
Halibut, frozen	367,669	837,242	1,581,730	1,477,814	670,298	2,200	212,800	1,611,327	1,654,787	851,070	1,782,168	1,342,583	12,391,508	12,557,945
Herring	...	...	...	...	...	...	...	...	...	...	...	...	...	1,600
Herring, frozen	...	38,000	...	...	...	11,000	...	...	...	...	...	...	49,000	22,000
Lingcod, frozen	...	...	1,240	...	...	...	...	...	...	...	...	...	1,240	16,462
Rockfish, frozen	...	757	...	210,006	188,545	1,500	...	699	31,438	61,060	160,246	111,192	757	425
Sablefish, frozen	72,550	48,756	85,131	...	...	...	...	...	...	...	...	...	896,573	2,097,165
Salmon:														
Chinook	3,556	1,875	19,594	84,301	60,447	35,160	44,004	237,791	52,685	56,201	263,557	169,899	204,933	167,421
Chinook, frozen	48,300	79,684	207,474	172,588	64,294	63,681	...	...	...	...	...	...	1,458,158	1,049,877
Chum	...	...	...	...	1,440	...	...	732	...	1,563	7,073	3,015	69,222	296,880
Chum, frozen	7,542	7,876	39,981	...	...	...	...	...	...	12,257	17,568	8,742	53,621	542,199
Pink, frozen	...	7,991	7,063	...	...	...	...	...	...	...	...	...	...	51,376
Silver	...	...	...	...	...	...	...	...	...	...	...	...	...	2,430
Silver, frozen	10,000	207,213	387,013	220,480	173,165	77,675	...	50,800	362,920	315,345	505,764	612,991	2,913,166	2,387,293
Sockeye, frozen	250	523	...	...	...	...	...	...	867,550	...	...	...	868,323	477,320
Unclassified, frozen	1,200	...	2,601	...	...	1,300	5,111	19,344	1,000	...	...	...	1,200	1,200
Fillets, other, frozen	...	...	...	...	5,610	...	...	...	27,600	27,230	6,848	4,442	40,646	...
Crabs, frozen	...	...	...	...	2,220	948	...	...	37,718	84,495	82,980	...	143,420	644,421
Crabmeat, frozen	3,120	630	480	1,461	960	18,644	1,455	33,660	...	...	66,075	...	232,262	474,070
Shrimp, frozen	16,500	3,440	5,880	...	...	6,576	6,576	2,216	5,004	240	240	474	54,930	85,801
Shrimpmeat, frozen	92,683	39,644	65,896	6,324	312	38,842	22,760	57,720	...	7,080	38,440	31,293	404,018	504,672
Total Fresh	3,556	1,875	19,594	84,301	60,447	50,996	...	...	...	...	...	...	220,769	523,837
Total Frozen	617,834	1,271,756	2,384,489	2,088,673	1,106,844	229,228	292,677	2,014,089	3,040,702	1,416,301	2,929,474	2,284,857	19,676,924	20,932,032
GRAND TOTAL	621,390	1,273,631	2,404,083	2,172,974	1,167,291	280,224	292,677	2,014,089	3,040,702	1,416,301	2,929,474	2,284,857	19,897,693	21,455,869
Cured Fish:														
Herring, salted ... Bbl.	...	...	...	...	...	...	...	...	...	...	...	...	...	1,800
Sablefish, salted ... Bbl.	...	...	...	...	...	...	...	...	...	27	...	73	256	59,800
Salmon, mild-cured ... Tcs.	...	...	2	51	32	134	478	156	733	325	159	95	10,500	3,530,175
Salmon, salted ... Bbl.	7,425	...	...	...	...	...	...	1,066	...	...	79	...	79	223,400
Livers, frozen	...	...	...	...	...	...	...	...	...	...	...	...	...	46,786
Grayfish	...	...	...	...	...	...	...	...	70,535	8,700	29,461	12,398	152,052	644,862
Unclassified	...	...	...	...	...	30,963	...	...	...	...	...	...	...	...

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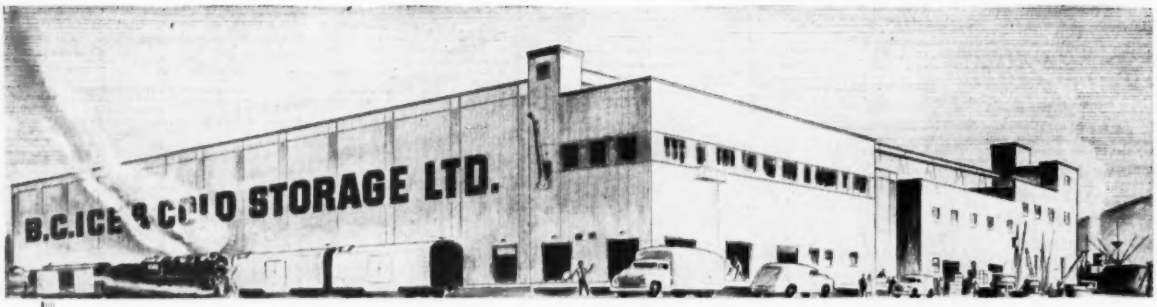

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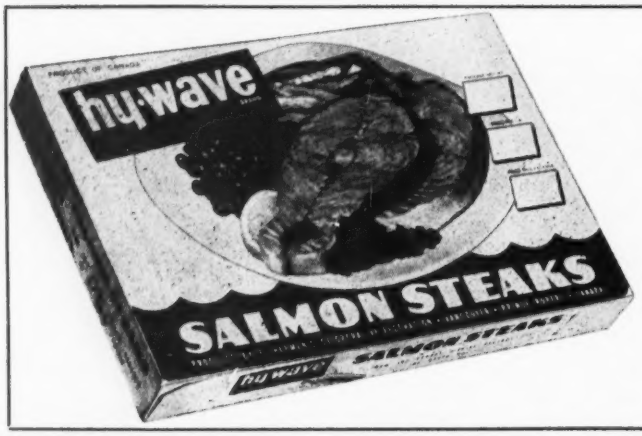

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1952 - FROZEN FILLETS- 1952

(Pounds)

	January	February	March	April	May	June	July	August	September	October	November	Total
Oregon:												
Rockfish	...	...	49,546	60,973	146	19,587	25,402	16,286	32,364	23,869	6,589	234,762
True Cod	...	...	...	...	330	...	21,915	12,411	1,067	...	...	35,723
Lingcod	...	...	1,574	2,024	7,092	9,008	1,885	360	505	565	...	23,013
Ocean Perch	...	...	...	...	...	...	79,548	86,211	90,078	79,231	2,236	337,304
Sole: Incl. Flounder	1,274	7,673	23,293	82,583	6,325	312,184	122,015	399,450	194,531	185,387	65,048	1,399,763
Unclassified	...	7,618	29,114	117,568	1,795	42,927	325	425	...	...	...	199,772
Total Oregon	1,274	15,291	103,527	263,148	15,688	383,706	251,090	515,143	318,545	289,052	73,873	2,230,337
Washington:												
Rockfish	5,300	81,267	64,299	88,568	84,133	11,721	11,717	10,460	32,801	34,820	25,980	451,066
True Cod	56,900	138,003	196,407	216,135	178,127	87,801	44,475	59,593	39,149	33,549	32,937	1,083,076
Lingcod	...	16,540	93,436	57,323	53,750	14,303	12,551	14,895	14,891	19,716	25,625	323,030
Ocean Perch	...	...	...	...	...	...	21,006	33,246	65,080	40,170	5,880	165,382
Sole: Incl. Flounder	49,329	226,208	130,231	486,418	215,821	163,934	385,482	147,426	126,202	212,992	106,877	2,250,920
Unclassified	...	...	...	...	78,085	67,948	18,039	1,565	1,203	325	...	167,165
Total Washington	111,529	462,018	484,373	848,444	609,916	345,707	493,270	267,185	279,326	341,572	197,299	4,440,639
Pacific Northwest Total	112,803	477,309	587,900	1,111,592	625,604	729,413	744,360	782,328	597,871	630,624	271,172	6,670,976

1952 - FILLET IMPORTS TO U.S. - 1952

(Pounds)

Country	Dec.	January		February		March		April		May		June	
	1951	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952
Canada	3,220,411	6,249,547	4,484,719	4,330,472	5,500,302	3,419,937	3,941,897	7,030,725	6,125,569	3,919,209	4,227,851	4,041,061	3,328,264
Denmark	68,806	28,736	33,656	...	208,444	37,200	920,599	106	590,531	14,595	185,928	31,054	78,643
England	118,004	...	14,056	30	130,492	48	460,363	...	393,002	...	160,090	340	72,907
Germany	79,136	...	...	...	42	47	87,820	...	141,980	30,350	180	1,300	205,235
Greenland	...	116,500	...	...	...	...	...	14,400	...	...	...	...	...
Holland	75,354	...	1,860	2,112	42,422	27,673	223,582	564	414,531	12,500	96,236	39,352	179,712
Iceland	1,218,173	2,515,242	4,952,692	331,562	2,249,026	4,359,390	5,354,466	1,438,166	2,992,609	1,342,012	230,630	358,100	618,682
Norway	...	479,248	...	536,096	939,479	394,845	1,436,454	313,800	1,049,364	765,840	331,080	34,416	641,422
Miscellaneous	1,405	...	48,260	...	...	...	60	...	388	...	...	...	48
Total	4,781,289	9,389,273	9,535,243	5,200,272	9,070,207	8,239,140	12,425,241	8,797,761	11,707,974	6,084,506	5,231,995	4,505,623	5,124,913

Country	July		August		September		October		November		TOTAL	
	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952
Canada	6,737,300	8,075,762	4,484,559	3,959,933	3,220,884	3,356,519	7,305,517	5,289,844	3,782,621	2,858,303	57,742,234	51,148,963
Denmark	32,267	101,406	17,040	103,441	2,940	59,530	2,436	22,230	9,115	47,568	244,295	2,351,976
England	10,650	99,353	...	37,810	40,092	108,223	60,250	79,544	33,730	38,017	263,144	1,593,857
Germany	7,000	298,080	128,622	140,160	60,000	133,594	...	242,240	100,215	207,780	406,670	1,457,111
Greenland	...	...	...	...	...	93,100	17,050	39,700	...	...	147,950	132,800
Holland	500	92,081	720	139,726	48,814	36,925	40,850	76,892	15,280	18,300	263,719	1,322,267
Iceland	3,831,898	4,226,878	2,085,144	1,933,069	593,576	846,944	4,344,224	8,588,886	2,295,786	3,400,384	24,713,273	35,374,266
Norway	73,460	529,688	587,700	696,212	203,544	1,100,716	83,680	2,252,935	439,680	857,899	3,912,309	9,835,249
Miscellaneous	...	25	...	15	...	...	...	...	...	...	1,405	50,201
Total	10,693,075	13,423,273	7,303,785	7,010,366	4,169,810	5,735,551	11,854,007	16,572,271	6,676,427	7,428,251	87,695,008	103,266,690

WASHINGTON TRAWL LANDINGS

Year	Sole and Flounders	"Cod"	Lingcod	Sablefish	Rockfish	Miscellaneous	TOTAL	Year
1930	339,932	26,318	.....	.....	24	32,419	398,693	1930
1931	323,064	30,269	.....	.....	.....	3,674	357,007	1931
1932	281,302	46,512	.....	.....	1,000	1,374	330,188	1932
1933	296,517	59,965	.....	.....	.....	5,200	361,682	1933
1934	247,684	25,405	13,454	.....	8,313	6,116	300,972	1934
1935	2,575,998	185,786	285,759	.....	63,284	23,743	3,134,570	1935
1936	4,791,994	406,361	237,229	.....	81,301	22,650	5,539,535	1936
1937	4,265,491	441,130	235,431	.....	72,640	14,919	5,029,611	1937
1938	5,036,852	456,814	286,439	.....	107,163	21,952	5,909,220	1938
1939	4,659,122	354,805	197,982	.....	112,395	231,614	5,555,918	1939
1940	5,917,096	518,705	247,007	.....	248,711	946,788	7,878,307	1940
1941	7,977,578	457,253	199,128	.....	93,286	582,295	9,389,538	1941
1942	9,575,018	1,172,811	3,845,055	118,406	1,034,417	717,279	16,462,986	1942
1943	13,350,936	996,963	4,859,693	778,451	4,464,702	1,015,394	25,366,139	1943
1944	7,806,664	623,151	4,254,298	1,429,682	5,132,233	270,898	19,516,926	1944
1945	9,185,003	2,417,053	4,177,839	529,507	16,093,712	211,068	32,614,182	1945
1946	9,709,656	3,701,647	3,193,436	628,756	10,094,207	93,705	27,421,407	1946
1947	9,294,256	2,442,583	2,481,497	155,981	6,024,582	99,887	20,498,786	1947
1948	13,744,310	5,371,084	4,649,453	314,229	10,262,442	162,166	34,503,684	1948
1949	10,368,493	5,465,538	3,063,672	586,368	12,610,526	588,282	32,682,879	1949
1950	10,379,364	6,330,873	2,365,948	497,822	12,210,430	414,791	32,199,168	1950
1951	10,750,629	8,403,570	1,855,840	1,277,731	9,939,626	2,092,874	34,320,270	1951
1952	12,768,742	10,505,996	1,501,875	690,330	11,296,636	3,083,870	39,847,449	1952

NOTE: — 1952 figures are complete through October 20, 1952, and include estimates for the balance of the year based on average otter trawl landings from Oct. 20 to December 31 as shown in Washington Department of Fisheries records for the last three years.

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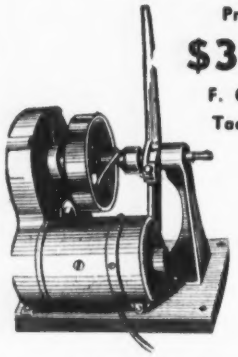

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HOLDINGS OF FROZEN SALMON IN CANADA BY MONTHS

Year	(Pounds)												Year
	Jan.	Feb.	March	April	May	June	July	August	September	October	November	December	
1943	6,388,157	4,182,422	3,187,367	1,424,622	749,130	421,899	618,566	1,292,092	2,491,083	3,922,968	7,861,284	9,720,826	1943
1944	8,245,459	6,228,542	4,036,324	2,572,067	1,723,599	1,192,453	1,323,970	2,225,799	4,458,686	7,569,646	9,592,929	8,525,062	1944
1945	5,754,484	4,212,779	3,064,075	1,916,384	1,224,894	653,660	975,614	2,603,913	5,848,648	8,889,338	12,264,609	11,286,939	1945
1946	8,995,555	6,201,817	4,664,805	2,859,525	1,470,544	719,534	1,477,539	2,310,009	4,287,429	6,910,578	10,414,810	12,529,428	1946
1947	10,484,688	8,068,793	5,641,958	4,244,254	3,066,183	2,041,997	1,849,142	3,317,623	4,788,724	6,115,604	10,991,495	11,346,880	1947
1948	12,471,000	10,916,000	8,925,000	5,322,000	3,454,000	2,821,000	2,721,000	3,992,000	4,679,000	6,007,000	12,481,000	10,379,000	1948
1949	9,310,000	7,786,000	5,574,000	3,880,000	2,997,000	2,467,000	3,220,000	4,770,000	7,350,000	9,306,000	14,987,000	11,573,000	1949
1950	9,573,000	8,243,000	6,045,000	4,095,000	2,916,000	2,193,000	2,526,000	3,493,000	7,153,000	13,008,000	16,790,000	14,409,000	1950
1951	12,032,000	10,172,000	6,808,000	5,009,000	4,023,000	2,597,000	2,640,000	4,450,000	7,560,000	10,811,000	16,479,000	14,204,000	1951
1952	12,636,000	10,170,000	9,246,000	6,636,000	5,784,000	4,354,000	5,183,000	6,308,000	9,044,000	10,427,000	12,042,000	*	1952

*Data not available.
NOTE: — All figures in accordance with latest reports. Source: Dominion Bureau of Statistics, Department of Trade and Commerce.

OREGON CRAB LANDINGS

Year	Dozen												Total
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1945	17,006	19,199	17,315	41,706	47,675	43,305	10,820	10,413	4,226	9,135	9,807	12,419	243,026
1946	17,065	21,815	30,732	34,074	80,626	34,414	13,694	5,783	4,568	8,859	12,834	14,814	279,278
1947	22,680	27,457	40,555	46,527	78,649	50,317	20,806	7,188	3,813	3,686	8,621	3,971	314,250
1948	35,592	37,973	63,516	87,353	96,885	34,841	15,171	9,098	4,969	4,205	2,662	9,206	401,471
1949	49,617	22,681	52,571	60,613	73,273	45,310	19,539	11,433	4,828	4,770	8,914	20,312	373,861
1950	22,414	26,186	38,315	35,513	46,910	27,012	6,997	4,145	3,914	3,095	9,730	25,864	250,095
1951	34,161	39,080	41,361	49,042	54,348	11,740	4,764	3,742	2,065	...	...	...	240,303
1952	19,864	23,672	28,024	41,781	45,616	10,852	4,916	2,541	1,679	7,322	...	...	186,267

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TERMINAL ISLAND CALIFORNIA

CALIFORNIA SALMON FISHERY BY MONTHS

MONTH & YEAR	(Pounds) Eureka Region	San Francisco Region	Monterey *Region	TOTAL Ocean Fishery	Sacramento Region	California TOTAL
1952						
January	...	...	...	...	385	385
February	...	...	...	...	1,860	1,860
March	...	...	...	...	2,480	2,480
April	...	...	...	...	6,529	6,529
May	178,932	343,999	391,499	914,430	4,950	919,380
June	599,258	812,530	444,802	1,856,590	...	1,856,590
July	878,244	913,493	193,330	1,985,067	...	1,985,067
August	711,838	293,262	62,178	1,067,278	23,058	1,090,336
September	122,253	553,455	1,443	677,151	663,090	1,340,241
Total	2,490,525	2,916,739	1,093,252	6,500,516	702,352	7,202,868
1951						
January	...	...	...	...	10,940	10,940
February	...	...	...	...	25,704	25,704
March	...	...	...	...	17,641	17,641
April	...	...	...	...	25,973	25,973
May	247,394	695,556	157,325	1,100,275	39,895	1,140,170
June	508,003	825,832	123,191	1,457,026	2,055	1,459,081
July	713,504	948,075	223,203	1,884,782	...	1,884,782
August	329,361	528,165	177,602	1,035,128	91,125	1,126,253
September	204,103	167,772	444	372,319	1,129,515	1,501,834
October	...	...	...	...	...	...
November	...	...	...	...	44	44
December	...	...	...	...	279	279
Total	2,002,365	3,165,400	681,765	5,849,530	1,343,171	7,192,701
1950 Total	2,221,509	2,860,971	774,420	5,856,900	1,211,513	7,068,413
1949 Total	2,601,390	2,455,543	473,741	5,530,674	899,090	6,429,764
1948 Total	4,033,992	1,544,479	250,906	5,829,377	1,939,801	7,769,178
1947 Total	5,868,577	1,485,657	749,336	8,103,570	3,380,484	11,484,054
1946 Total	4,544,037	2,079,449	571,470	7,194,956	6,463,245	13,658,201

*Includes small amounts of salmon landed south of Monterey region.

CALIFORNIA SALMON FISHERY

YEAR	(Pounds) Eureka Region	San Francisco Region	Monterey Region	TOTAL OCEAN FISHERY	Sacramento Region	GRAND TOTAL	YEAR
1926	3,808,135	936,330	51,755	4,796,220	1,287,859	6,084,079	1926
1927	3,385,349	1,488,746	717,048	5,591,143	920,786	6,511,929	1927
1928	2,774,315	815,815	334,659	3,924,789	553,777	4,478,566	1928
1929	2,750,560	658,718	1,054,096	4,463,374	521,310	4,984,684	1929
1930	3,501,539	1,008,233	279,415	4,789,187	1,213,607	6,002,794	1930
1931	3,940,911	428,298	91,471	4,460,680	949,850	5,410,530	1931
1932	3,360,778	122,009	80,900	3,563,687	1,267,051	4,830,738	1932
1933	3,390,482	157,485	569,907	4,117,874	448,967	4,566,841	1933
1934	2,893,725	818,812	286,230	3,998,767	401,707	4,400,474	1934
1935	3,906,728	337,751	219,715	4,464,193	888,888	5,353,081	1935
1936	3,479,716	447,548	145,194*	4,072,458	949,179	5,021,637	1936
1937	3,834,568	1,208,414	892,005*	5,934,987	974,871	6,909,858	1937
1938	1,853,715	117,549	199,657*	2,170,921	1,668,376	3,839,297	1938
1939	1,673,151	434,626	125,498	2,233,275	496,933	2,730,208	1939
1940	3,369,492	1,177,086	613,224	5,159,802	1,515,588	6,675,390	1940
1941	2,413,368	375,766	156,850*	2,945,984	844,963	3,790,947	1941
1942	2,255,862	1,642,017	165,393*	4,063,272	2,552,944	6,616,216	1942
1943	2,162,368	2,021,208	1,101,934	5,285,510	1,295,424	6,580,934	1943
1944	3,791,094	2,646,714	583,013*	7,020,821	3,265,143	10,285,964	1944
1945	4,627,714	2,431,954	853,086*	7,912,754	5,467,960	13,380,714	1945
1946	4,544,037	2,079,449	571,470*	7,194,956	6,463,245	13,658,201	1946
1947	5,868,577	1,485,657	749,870*	8,104,104	3,323,926	11,428,030	1947
1948	4,033,992	1,544,479	250,906*	5,829,377	1,939,801	7,769,178	1948
1949	2,574,205	2,455,000	473,598*	5,530,674	873,320	6,376,123	1949
1950	2,221,459	2,860,971	774,420*	5,856,850	1,150,313	7,007,163	1950
1951	2,002,365	3,165,400	681,765	5,849,530	1,343,171	7,192,701	1951
1952	2,490,525	2,916,739	1,093,252	6,500,516	702,352	7,202,868	1952

*Includes a small amount of salmon landed in Santa Barbara Region.

1952 – FISH LIVER RECEIPTS by SEATTLE DEALERS – 1952

SPECIES	(Pounds) Dec.'51	Jan.'52	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	TOTAL
Dogfish	34,416	45,859	7,495	14,839	26,516	52,663	22,457	4,927	10,257	11,523	21,598	9,499	262,049
Halibut Viscera	...	...	...	...	...	81,921	102,019	171,130	64,127	11,968	15,471	683	447,319
Sablefish Viscera	216	9,077	914	160	28	60	1,006	3,404	5,354	37,654	22,682	16,343	96,892
Lingcod Viscera	8,950	9,983	5,104	9,851	6,977	6,663	3,162	3,228	4,917	2,720	5,530	2,907	69,992
Soupfin Shark	3,486	4,436	754	2,453	352	196	10,127	3,971	7,699	2,192	6,499	106	42,271
Miscellaneous	60,221	11,186	10,001	81,438	94,914	56,639	15,464	33,803	32,203	17,592	77,867	17,856	509,184
Total	107,289	80,541	24,268	108,741	128,787	198,142	154,229	220,463	124,557	83,649	149,647	47,394	1,427,707

FROZEN

COLUMBIA RIVER FROZEN FISH PACKS

YEAR	(Pounds)						YEAR
	Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	
1928	...	326,541	1,156,598	30,000	102,188	1,615,327	1928
1929	24,000	607,483	1,544,779	78,000	233,527	2,487,789	1929
1930	14,700	374,322	1,322,737	...	547,006	2,258,765	1930
1931	4,699	392,581	1,311,033	35,600	559,993	2,303,906	1931
1932	...	733,234	538,795	10,000	54,427	1,336,456	1932
1933	75,000	886,789	859,563	...	153,834	1,975,186	1933
1934	199,362	489,183	959,916	49,620	154,765	1,852,846	1934
1935	161,827	943,442	461,847	60,494	243,934	1,871,544	1935
1936	48,818	178,922	629,896	117,624	123,920	1,099,182	1936
1937	25,000	391,000	520,996	35,000	61,253	1,633,249	1937
1938	211,350	207,478	465,909	118,465	119,594	1,122,796	1938
1939	252,692	607,100	352,884	135,347	243,600	1,591,623	1939
1940	553,369	267,370	33,573	98,642	253,634	1,206,488	1940
1941	602,210	178,498	1,628	118,120	761,013	1,661,469	1941
1942	216,684	563,780	222,684	186,710	1,556,008	2,745,866	1942
1943	161,452	956,719	3,958,405	359,050	2,311,503	7,747,129	1943
1944	628,285	1,917,542	5,733,930	178,742	758,745	9,217,244	1944
1945	506,242	2,655,787	2,176,400	270,634	8,670,915	14,279,978	1945
1946	555,884	4,373,849	4,511,986	416,003	3,147,126	13,004,848	1946
1947	618,266	1,272,508	1,681,488	60,786	985,697	4,618,745	1947
1948	410,091	1,187,802	4,241,705	329,857	...	6,169,455	1948
1949	324,527	458,280	2,567,863	289,205	121,994	3,761,869	1949
1950	417,651	483,068	3,382,682	63,081	333,117	4,679,599	1950
1951	291,936	795,305	3,199,153	169,894	124,761	4,540,849	1951
1952	219,223	1,157,484	3,827,761	166,072	136,084	5,506,624	1952

Note:-Since 1942 Steelheads have been combined with Salmon. Figures given in this column for years after '42 cover quantities of frozen fillets of all varieties of fish reported. Data in this table based on reports of principals and custom freezers to this journal.

PUGET SOUND FROZEN FISH PACKS

YEAR	(Pounds)						YEAR
	Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	
1928	3,929,600	5,737,402	72,399	1,676,530	1,091,008	12,506,939	1928
1929	4,365,139	5,737,367	118,034	1,339,912	1,272,772	12,833,224	1929
1930	4,008,690	6,767,538	58,246	2,057,845	2,114,206	15,006,525	1930
1931	7,124,976	7,034,178	57,815	941,986	742,543	15,901,498	1931
1932	6,241,135	4,764,945	11,375	1,045,588	470,872	12,533,915	1932
1933	8,575,289	8,685,729	*160,080	842,039	456,298	18,719,435	1933
1934	9,592,971	8,276,309	* 54,479	1,381,287	1,306,520	20,611,566	1934
1935	7,056,953	10,996,930	...	1,740,122	1,415,122	20,939,915	1935
1936	7,395,485	6,704,971	...	1,309,243	811,273	16,220,972	1936
1937	8,490,747	10,121,808	...	2,314,399	1,578,453	22,505,407	1937
1938	8,174,462	7,796,087	...	2,248,790	2,342,902	20,562,241	1938
1939	7,795,768	4,488,450	...	1,887,336	1,827,266	15,998,820	1939
1940	8,645,576	6,748,021	...	1,832,112	1,600,432	18,826,141	1940
1941	9,440,017	7,569,858	...	1,348,723	2,345,540	20,704,138	1941
1942	6,815,874	5,608,307	Fillets	1,221,946	3,066,177	16,712,304	1942
1943	4,250,010	2,530,755	429,394	860,577	6,846,616	14,917,352	1943
1944	5,237,071	4,264,315	2,893,179	2,305,848	3,777,952	18,478,365	1944
1945	6,728,420	9,030,403	4,193,268	1,071,769	5,673,660	26,697,547	1945
1946	8,050,947	6,388,388	3,895,400	1,714,185	2,807,240	22,856,160	1946
1947	4,933,377	4,241,310	1,658,152	921,204	1,004,330	12,758,373	1947
1948	7,152,574	4,355,399	2,393,487	1,519,514	797,882	16,218,856	1948
1949	7,535,497	5,123,763	1,192,440	1,846,314	1,088,490	16,786,504	1949
1950	6,270,705	4,706,925	1,166,019	1,547,807	4,520,880	18,917,886	1950
1951	7,789,536	4,314,516	2,119,910	1,791,000	2,275,577	18,290,539	1951
1952	8,345,650	5,532,676	3,400,786	1,661,919	751,310	19,296,340	1952

Note:-Since 1942 Steelheads have been combined with Salmon. Figures given in this column cover the quantities of frozen fillets of all varieties of fish reported.
*All Steelheads frozen on Puget Sound were Columbia River fish shipped to Seattle for freezing.

HALIBUT FREEZING IN CANADA BY MONTHS

Year	(Pounds)												
	Jan.	Feb.	March	April	May	June	July	August	September	October	November	December	TOTAL
1943	282,093	296,651	379,829	573,065	2,311,086	2,630,088	654,403	683,421	1,149,085	175,542	100,641	86,663	9,322,567
1944	282,698	273,600	348,847	86,289	314,432	5,465,098	3,232,596	802,380	499,926	436,090	171,886	195,405	12,109,247
1945	394,811	222,238	240,413	220,018	3,489,342	3,408,682	3,408,682	645,187	924,675	924,671	623,475	362,478	14,864,672
1946	183,346	344,076	571,122	10,869	4,558,350	3,798,912	849,659	1,403,497	335,440	174,361	304,517	166,185	12,700,334
1947	332,759	217,645	358,022	167,994	6,059,714	4,782,689	2,186,016	2,575,403	287,595	206,741	52,711	18,000	17,245,289
1948	132,000	68,000	186,000	21,000	7,623,000	4,530,000	1,541,000	210,000	276,000	56,000	182,000	(1)	14,825,000
1949	30,000	7,000	21,000	49,000	7,821,000	4,990,000	1,878,000	402,000	85,000	340,000	43,000	9,000	15,675,000
1950	10,000	41,000	41,000	260,000	8,953,000	4,991,000	2,039,000	392,000	90,000	321,000	237,000	(2)	17,375,000
1951	16,000	42,000	32,000	87,000	11,499,000	3,071,000	560,000	1,109,000	164,000	44,000	7,000	7,000	16,638,000
1952	15,000	45,000	31,000	41,000	7,007,000	5,926,000	2,405,000	1,036,000	406,000	70,000	(1)	(1)	16,982,000

(1) Data not available. (2) Less than three firms reported, therefore the data may not be shown.
NOTE: – All figures in accordance with latest reports. Source: Dominion Bureau of Statistics – Ottawa, Canada.

Smelt Pack Short for Third Year Running

The Pacific Northwest catch of Columbia River smelt—properly eulachon smelt — was disappointing in 1952 for the third successive year. This imposed a serious handicap on the package-freezing trade, which had come to depend upon these little fish for one of its staple products.

Packers in the Columbia River district were obliged to have their packaged smelt requirements largely filled for them in Canada, where the runs of this smelt appeared entirely normal.

Growth of the packaging of frozen fish products was particularly notable in 1952, with the trend to knife-sliced steaks the stand-out factor.

Washington Eulachon Smelt Catches

YEAR	(Pounds) Cowlitz River	Grays River	Lewis River	Columbia River	TOTAL
1939	1,012,730	30,300	1,342,675	184,348	2,570,053
1940	730,170	60,450	1,341,250	384,650	2,516,520
1941	1,794,233	.....	376,975	42,919	2,214,127
1942	1,570,915	51,750	.....	54,325	1,676,990
1943	2,973,340	3,675	270,375	124,500	3,371,790
1944	1,125,674	10,900	504,000	249,522	**1,942,771
1945	2,048,438	42,753	1,552,770	215,040	*3,691,463
1946	2,674,040	300	.....	51,099	2,725,439
1947	1,192,663	.....	.....	128,280	1,320,943
1948	2,197,810	.....	547,590	296,240	3,041,640
1949	750	250	1,940,850	387,701	2,329,551
1950	31,320	11,600	557,157	379,730	***980,832
1951	.....	.....	1,050	649,838	† 651,268
1952	380,554	.....	8,050	400,747	†† 807,159

* Includes 32,462 pounds caught in the Kalama River. *** Includes 1,025 pounds taken in Kalama River.
** Includes 44,300 lbs. from Kalama River; 7,675 lbs. from Naselle River; & 700 lbs. from Nemah River
† Includes 380 pounds taken in Kalama River. †† Includes 17,808 pounds taken in Kalama River.

1952 - Weighted Average Shellfish Prices at Seattle - 1952

SPECIES	Unit	Dec.,'51	Jan.,'52	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.
Clams:													
Butter	Lbs.	$ 0.11	$ 0.125	$ 0.11	$ 0.11	$ 0.11	...	...	...	...	...	$ 0.11	...
Razor	Lbs.	...	...	...	0.26	...	...	...	...	...	...	...	...
Little Neck	Lbs.	0.14	0.145	0.13	0.13	0.13	...	...	...	...	...	0.12	$ 0.13
Clammeat	Lbs.	...	0.35	0.45	0.45	9.42	...	...	...	...	...	...	0.45
Crabs, Dungeness	Doz.	4.47	4.05	4.15	4.15	4.15	...	$ 4.15	$ 4.15	$ 4.15	...	4.15	4.15
Crabs, cooked	Lbs.	...	0.285	0.29	0.29	0.29	$ 0.29	0.29	0.29	...	...	0.29	0.29
Crabmeat	Lbs.	1.20	1.10	1.10	1.10	1.10	...	1.10	1.10	1.10	...	1.20	1.20
Octopus	Lbs.	0.05	0.05	0.05	0.05	0.05	...	0.05	0.05	0.05	...	0.05	0.05
Oysters:													
Olympia	Gal.	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	$ 21.00	21.00	21.00
Pacific	Gal.	4.45	4.50	4.67	4.67	4.67	...	4.67	4.67	4.67	4.50	4.67	4.25
Scallops, local	Gal.	5.00	...	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	6.00	...
Shrimp, local	Lbs.	...	...	...	...	0.42	0.40	...	...	...	...	...	...

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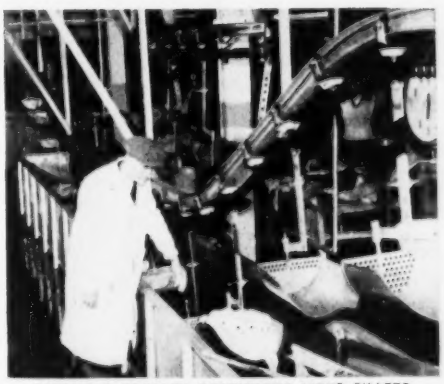

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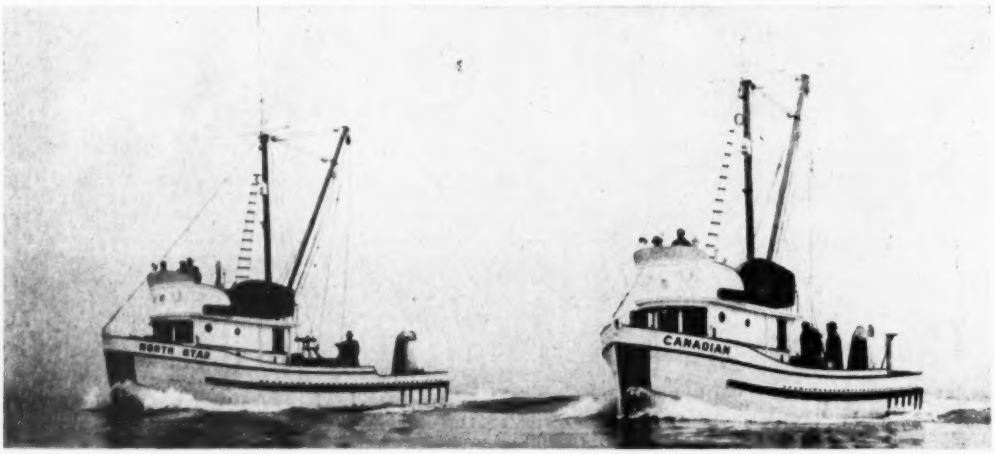
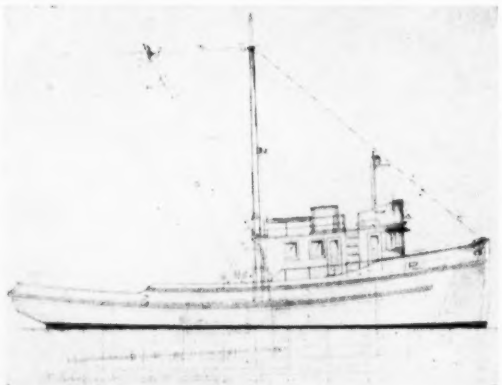
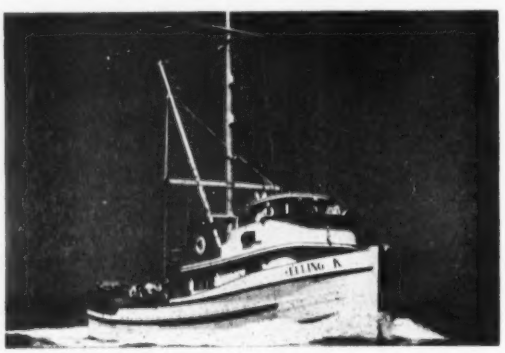


"North Star" and "Canadian" 44' x 13'6" wood combination fishing vessels built in Canada from H. C. Hanson plans supplied to the Sterling Shipyards, Ltd., Vancouver, B. C. Bent oak frames. Unusually deep draft. Power: 80-hp. Diesels. Speed: 8¾ knots. These modern vessels, with assistance of experienced Canadian fishermen, will be used to introduce West Coast seining, dragging and long-lining methods to the fishing industry in Ceylon.

"AL H", 57' x 16' wood combination seiner and dragger, designed and built under the supervision of H. C. Hanson for the New England Fish Co. Power: 150-hp. Diesel. Speed: 10.5 knots. A sistership, the "Barbara S" was also built for New England from the same plans.



60' x 16' H. C. Hanson-designed wood combination fishing vessel for the Embassy of Ceylon. Suitable for seining, dragging, trolling and long-lining. Power: 165-hp. Diesel. Speed: 10.6 knots.



"ELLING K", 75' x 20' x 10'3" wood combination herring and salmon seiner of H. C. Hanson design for Knute Floe of Vancouver, B. C. Power: 275-hp. Diesel. Speed: 11.4 knots.

Distinctive New Fish Boat Designs—

Plans Available of Proven Boats... All Types and Sizes, Steel and Wood.

H. C. HANSON, NAVAL ARCHITECT

102 COLMAN FERRY TERMINAL SEATTLE 4, WASHINGTON ELiot 3549

ALASKA FROZEN FISH PACKS

YEAR	(Pounds) Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	YEAR
1928	9,328,837	7,275,009	4,105	623,857	161,332	17,393,140	1928
1929	11,789,477	5,819,643	3,000	514,405	268,857	18,395,382	1929
1930	11,859,772	6,217,498	...	511,249	168,870	18,757,389	1930
1931	6,641,793	5,071,593	4,431	254,856	594,392	12,567,065	1931
1932	2,332,728	5,058,857	1,275	51,284	61,461	7,505,605	1932
1933	5,851,556	4,102,999	3,747	91,086	93,841	10,143,209	1933
1934	6,133,142	5,534,916	27,272	167,725	155,453	12,018,508	1934
1935	5,021,708	4,662,272	7,600	633,412	221,066	10,546,058	1935
1936	7,287,861	5,284,030	24,091	834,140	88,705	13,518,827	1936
1937	7,465,551	5,794,466	2,500	1,924,817	305,149	15,492,483	1937
1938	6,904,640	7,918,897	4,274	773,787	68,305	15,669,903	1938
1939	6,389,488	4,783,751	2,465	1,525,600	280,794	12,982,098	1939
1940	8,310,553	6,304,064	11,413	1,824,532	682,721	17,133,283	1940
1941	7,564,940	6,119,050	...	1,720,977	924,420	16,329,387	1941
1942	8,720,056	7,908,717	8,606	4,851,974	361,554	21,850,907	1942
1943	11,068,724	9,114,694	...	3,986,438	825,505	24,995,361	1943
1944	19,214,203	10,753,715	...	5,413,503	1,892,846	37,274,267	1944
1945	19,353,649	13,374,086	...	5,955,388	3,396,849	42,079,972	1945
1946	14,966,616	12,036,956	30,000	4,519,989	2,075,530	33,629,091	1946
1947	20,638,301	10,197,755	4,597	886,535	383,473	32,110,661	1947
1948	26,020,134	9,582,232	165,370	5,065,056	5,290	40,838,082	1948
1949	20,914,221	12,222,337	1,309	3,772,851	271,901	37,182,619	1949
1950	25,625,940	8,467,426	5,113	566,965	98,409	34,763,853	1950
1951	19,577,948	8,780,110	6,988	3,241,556	820,473	32,427,075	1951
1952	[illegible]	5,32[illegible]	[illegible]	[illegible]	205,955	23,872,478	1952

Note:-Since 1942 Steelheads have been combined with Salmon. Figures given in this column cover the quantities of frozen fillets of all varieties of fish reported. Data in this table based on individual reports of packers and custom cold storages to this journal.

1952-Seattle-Weighted Average Prices Paid to Fishermen-1952

SPECIES	Cts. per Pound Dec.'51	Jan.'52	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.
Cod, true, ex-vess., Dr.	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75
Cod, true, ex-vess., Rd.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flounder, ex-vess., Rd.	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Halibut, No. 1, ex-vess., Dn.	...	...	...	...	26.2	21.2	24.3	24.4	24.0	25.6	25.0	25.3
Halibut, No. 2, ex-vess., Dr.	...	...	...	...	...	18.9	22.7	22.5	21.8	...	...	...
Lingcod, ex-vess., Dr.	15.4	11.0-21.6	15.1	13.4	10.6	11.0	10.6	11.0	10.9	10.8	10.8	13.0
Lingcod, ex-vess., Rd.	8.0	10.7	8.5	8.5	8.5	6.0	8.5	8.5	8.5	8.5	8.5	8.5
Rockfish, ex-vess., Dr.	8.8	9.8	8.6	7.7	7.1	5.0	6.5	5.0	5.0	5.0	5.0	5.0
Rockfish, ex-vess., Rd.	5.5	5.0-6.0	5.2	5.3	5.4	5.5	5.3	5.4	5.5	5.6	5.5	5.4
Sablefish, ex-vess., Dr.	12.0	...	...	...	7.5	12.0	11.6	11.1	12.4	13.7	15.7	16.5
Sablefish, ex-vess., Rd.	6.0	...	...	...	...	...	...	6.0	6.0	...	6.0	...
Salmon:												
Chinook, large, ex-vess., Dn.	...	...	...	...	38.8	36.6	37.5	35.6	38.5	38.5	39.2	...
Chinook, small, ex-vess., Dn.	...	...	...	...	37.9	30.3	37.1	30.4	31.3	30.3	31.3	...
Chinook, white, ex-vess., Dn.	...	...	...	...	37.9	27.9	30.7	28.7	30.3	30.0	32.2	...
Chinook, ex-vess., Rd.	...	...	...	...	...	...	...	...	...	19.5	19.0	20.0
Chum, ex-vess., Rd.	...	...	...	...	...	...	...	...	...	12.5	14.0	13.5
Silver, ex-vess., Dn.	...	...	...	...	...	...	23.0	21.6	25.1	28.2	29.0	...
Silver, ex-vess., Rd.	...	...	...	...	...	...	...	...	...	18.0	17.7	17.5
Pink, ex-vess., Rd.	...	...	...	...	...	...	...	14.0	...	...	...	...
Sole, English, ex-vess., Rd.	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Sole, Petrale, ex-vess., Rd.	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Sole, Other, ex-vess., Rd.	5.5	5.0	8.0	7.5	7.2	7.3	7.1	6.6	7.4	6.5	7.4	7.7
Tuna, Albacore, ex-vess., Rd.	...	...	...	...	...	...	...	...	...	...	19.5	...

BRITISH COLUMBIA FROZEN FISH PACKS

YEAR	(Pounds) Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	YEAR
1928	6,922,064	10,183,276	503,798	707,488	1,793,317	20,190,943	1928
1929	7,013,413	7,971,042	324,123	533,000	1,305,898	17,147,476	1929
1930	5,375,642	6,544,460	414,720	645,142	741,386	13,721,350	1930
1931	5,467,170	5,758,952	414,000	292,829	240,469	12,173,420	1931
1932	6,197,495	7,672,062	533,244	307,922	228,740	14,939,463	1932
1933	6,620,254	7,158,967	344,974	386,751	471,924	14,984,870	1933
1934	8,956,815	10,182,469	40,672	180,119	920,509	20,280,582	1934
1935	9,756,717	10,707,787	226,000	789,000	861,860	22,341,364	1935
1936	9,504,340	11,320,303	234,690	1,266,555	742,043	23,062,931	1936
1937	9,550,661	11,698,592	200,361	1,378,442	698,481	23,526,537	1937
1938	10,870,867	12,662,933	324,000	1,329,009	987,260	26,174,069	1938
1939	13,414,006	9,631,742	189,516	1,080,053	813,956	25,129,273	1939
1940	13,453,612	11,347,239	237,000	1,285,915	1,317,404	27,641,170	1940
1941	14,560,498	9,632,364	91,913	1,604,554	966,559	26,855,888	1941
1942	16,571,639	12,150,338	18,046	1,697,327	3,541,929	33,979,279	1942
1943	10,397,337	13,313,250	60,076	2,320,559	2,667,881	28,759,103	1943
1944	12,574,036	14,793,573	572,315	1,856,055	3,763,055	33,559,190	1944
1945	10,290,942	19,931,674	1,745,529	1,254,623	5,890,142	39,112,910	1945
1946	12,782,294	14,384,544	1,972,000	1,778,855	11,486,110	42,403,803	1946
1947	14,930,795	13,583,850	1,057,828	729,492	6,357,106	36,659,071	1947
1948	11,512,287	15,209,533	1,650,856	1,651,028	18,236,028	48,259,732	1948
1949	12,629,300	19,584,100	3,480,500	1,967,500	6,946,700	44,608,100	1949
1950	15,081,000	23,425,000	701,789	271,848	5,393,954	44,873,591	1950
1951	13,358,332	16,000,909	2,292,931	1,050,718	7,492,483	40,195,373	1951
1952	12,992,587	17,351,803	7,418,334	883,769	3,720,635	42,367,128	1952

Note:-Since 1942 all Steelheads have been combined with Salmon; and figures given in the "Steelheads and Fillets" Column for years 1942 cover quantities of fillets of all varieties of fish reported.

ALASKA STATIONS
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FRESH, CANNED AND MILDCURED SALMON

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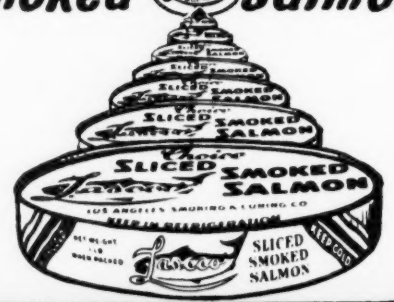

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Los Angeles Smoking & Curing Co.

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MILD CURE

Caution, coupled with short salmon runs at strategic points, carried Pacific mild curing down to 7,156 tierces in 1952, lowest figure since 1943, and with that single exception the lowest since 1901.

SECOND shortest pack in 50 years was produced by the Pacific mild cured salmon business in 1952, when only 7,156 tierces were split, down 2,068 from the already-low level of 1951; and more than 3,000 tierces short of the 1950 pack.

Save for 1943 with its scant pack of 5,889 tierces, the 1952 production was the smallest since 1901, when mild curing was in its barest beginnings.

Mild curing suffered from sharp reductions in the Alaskan and California packs in 1952 as compared with the previous year.

The Alaska curtailment was the result of a combination of economic and biological factors.

Market conditions during the spring months of 1952 were not such as to encourage curing, and as result splitters showed little interest in early operations.

Then the fishermen came up with a proposal for "guaranteed minimum" prices which proved entirely unacceptable to the buyers. This produced a strike which closed Alaska trolling operations of any consequence through May and into June.

When fishing finally got under way the fish were hard to find. This was particularly true in the Sitka area, where fishing was the worst in a long while. The Noyes Island area of Alaska also was distinctly disappointing—and at no point was fishing really *good* at any time during the season.

California Pack Limited

California's pack also was severely curtailed as compared with 1951, but it is believed that this condition resulted more from weariness on the part of the operators than from actual scarcity of fish. Experience with marketing the 1951 pack had not been happy—quite in contrast with that of 1950—and the trade was not particularly interested in taking on more Californias in 1952 until the carryover from the previous year had been marketed.

Washington state trollers won something of a court victory in 1952 when they secured a decision favoring their position with respect to the state's taxation of fish caught on the high seas. The decision resulted in refunds of taxes where claims could be accompanied by evidence showing the origin of the fish.

Limitations on Trolling

Late in 1952 the Pacific Marine Fisheries Commission moved to open the season for Silver salmon trolling on July 1 instead of June 15, as at present. The commission's action was taken with the understanding that in California the restriction should be made on the basis of size limit rather than date.

The commission's studies have indicated a serious economic loss in taking Silver salmon prior to July 1, as this species makes a substantial part of its growth in the early summer of the year on maturity. Thus the additional two weeks of closed season are calculated to give the fishermen materially greater return.

1952 - MILD CURED SALMON - 1952

Company	Location	Tierces (825 lbs. Net)
ALASKA		
Atlantic & Pacific Packing Co.	Pelican	5
Booth Fisheries Corporation	Pelican	117
Engstrom, E. E.	Pelican	66
Farwest-Wrangell Co.	Wrangell	295
	Sitka	77
Halibut Producers Cooperative	Pelican	72
	Ketchikan	11
Juneau Cold Storage Co.	Juneau	6
Kayler-Dahl Fish Co.	Petersburg	287
McCallum-Legaz Fish Co.	Sitka	120
New England Fish Co.	S. E. Alaska	395
Northern Commercial Co.	Yukon River	72
	Juneau	31
Oxenberg Bros.	Ketchikan	138
	Wrangell	30
Phillips, E. C.	Ketchikan	131
Rupert Fish Co.	Ketchikan	175
San Juan Fishing & Packing Co.	Ketchikan	105
Sebastian-Stuart Fish Co.	Pelican	88
	Wrangell	15
Sitka Cold Storage Co.	Sitka	200
Union Trade & Packing Co.	Kalinin Bay	79
	Juneau	143
Vita Food Products Co.	Pelican	341
	Petersburg	74
	Wrangell	33
Whiz Fish Products Co.	Ketchikan	100
	Pelican	300
Miscellaneous	S. E. Alaska	83
TOTAL ALASKA		3,489

Company	Location	Tierces (825 lbs. Net)
BRITISH COLUMBIA		
British Columbia Packers, Ltd.	All Stations	107
Canadian Fishing Co.	Vancouver	30
Fishermen's Cooperative Federation	Prince Rupert	500
	Vancouver	115
TOTAL BRITISH COLUMBIA		752
PUGET SOUND		
Booth Fisheries Corporation	Seattle	94
Eardley Fisheries Co.	Seattle	889
McCallum-Legaz Fish Co.	Seattle	161
New England Fish Co.	Seattle & Everett	69
Oxenberg Bros.	Seattle	343
San Juan Fishing & Packing Co.	Seattle	399
Sebastian-Stuart Fish Co.	Seattle	47
Washington Fish & Oyster Co.	Seattle	66
Whiz Fish Products Co.	Seattle	250
TOTAL PUGET SOUND		2,318
COLUMBIA RIVER		
Union Fishermen's Cooperative Pkg. Co.	Astoria	4
CALIFORNIA		
Bell Smoked Fish Co.	San Francisco	50
United Fish Co.	Fort Bragg	43
Miscellaneous	All Points	400
TOTAL CALIFORNIA		493
GRAND TOTAL, PACIFIC COAST		7,052

PACIFIC MILD CURED SALMON PACK

(IN TIERCES OF 825 LBS. NET WEIGHT)

YEAR	Alaska	British Columbia	Puget Sound	Columbia River	Oregon Coast	California Coast	Sacramento River	Kamchatka	Recapitulation		ANNUAL TOTALS	YEAR
									Kings	Silvers		
1900	. . .	. . .	. . .	1,275	. . .	. . .	950	. . .	Segregation of pack as to species not available for years prior to 1923.		2,225	1900
1901	67	. . .	600	3,000	. . .	. . .	3,100	. . .			6,767	1901
1902	67	. . .	425	4,213	188	504	2,325	. . .			7,722	1902
1903	8	. . .	824	6,725	. . .	354	3,600	. . .			11,511	1903
1904	34	. . .	1,250	9,088	. . .	448	4,719	. . .			15,539	1904
1905	189	1,175	3,000	9,805	415	310	2,979	. . .			17,873	1905
1906	1,126	957	. . .	8,000	740	685	2,177	. . .			13,685	1906
1907	1,657	1,993	2,060	6,070	860	722	4,102	. . .			17,464	1907
1908	1,378	1,060	. . .	4,960	. . .	252	3,243	. . .			10,893	1908
1909	2,292	1,560	2,109	5,540	664	991	5,111	. . .			18,267	1909
1910	3,357	1,638	2,435	7,922	1,465	75	5,516	. . .			22,408	1910
1911	3,164	2,006	2,745	8,185	1,377	770	2,011	. . .			19,758	1911
1912	5,245	1,380	3,013	5,824	3,479	100	3,274	. . .			22,315	1912
1913	7,440	2,125	3,631	5,746	2,681	550	4,789	. . .			26,952	1913
1914	3,872	3,182	1,934	5,205	457	1,476	1,829	. . .			17,955	1914
1915	2,966	1,119	2,235	4,078	333	945	1,630	. . .			13,306	1915
1916	4,475	767	1,755	4,656	194	1,069	650	. . .			13,566	1916
1917	2,955	429	1,063	1,886	. . .	300	1,508	. . .			8,181	1917
1918	4,234	729	1,093	1,804	275	721	1,913	. . .			9,869	1918
1919	6,803	1,173	2,423	3,328	148	2,381	2,355	. . .			18,611	1919
1920	2,770	1,116	2,036	2,275	102	1,793	1,345	. . .			11,437	1920
1921	3,966	1,076	4,517	3,051	160	1,251	812	. . .			14,833	1921
1922	5,158	2,253	4,727	1,621	162	550	1,195	. . .			15,666	1922
1923	4,075	1,819	5,799	1,769	176	1,229	606	. . .	15,129	344	15,473	1923
1924	6,069	2,969	6,409	2,320	286	2,624	1,291	. . .	21,476	492	21,968	1924
1925	7,119	3,098	5,600	2,746	547	2,241	1,523	500	22,530	844	23,374	1925
1926	5,781	2,183	4,087	1,055	1,205	929	1,767	650	16,585	1,072	17,657	1926
1927	8,982	2,689	5,160	951	918	927	1,125	854	19,390	2,216	21,606	1927
1928	5,784	2,676	4,304	1,305	2,163	1,686	179	783	14,051	4,046	18,880	1928
1929	5,477	3,016	4,311	1,969	1,787	1,160	155	1,083	15,749	3,209	18,958	1929
1930	5,331	2,630	4,361	1,068	102	1,184	124	2,144	16,049	895	16,944	1930
1931	4,123	1,083	5,700	1,251	372	1,027	164	712	13,862	570	14,432	1931
1932	5,560	1,542	3,650	2,012	1,119	752	294	640	13,443	2,126	15,569	1932
1933	4,852	3,097	3,527	2,431	660	1,392	37	340	15,295	1,041	16,336	1933
1934	4,908	4,657	3,882	1,855	270	1,572	5	776	16,960	965	17,925	1934
1935	5,487	2,665	3,563	1,730	210	2,090	439	670	15,450	1,404	16,854	1935
1936	5,222	1,642	4,897	1,138	68	1,939	366	840	15,611	495	16,106	1936
1937	6,373	4,055	2,775	604	. . .	1,026	49	778	15,552	108	15,660	1937
1938	7,786	3,128	3,657	1,292	387	627	945	787	16,451	2,158	18,609	1938
1939	7,724	2,802	2,937	501	20	417	119	600	14,905	224	15,129	1939
1940	5,210	693	3,531	33	. . .	711	308	11	10,283	714	10,497	1940
1941	8,862	1,474	3,561	229	. . .	360	15	. . .	14,174	302	14,501	1941
1942	6,748	1,055	2,494	20	. . .	. . .	. . .	. . .	10,241	76	10,317	1942
1943	3,869	811	1,022	21	. . .	166	. . .	. . .	5,278	611	5,889	1943
1944	3,518	2,019	959	16	. . .	1,259	1,329	. . .	7,969	*1,050	9,100	1944
1945	7,763	1,209	1,790	159	. . .	*1,065	1,570	. . .	10,843	*3,200	13,556	1945
1946	6,824	1,975	2,170	96	. . .	. . .	†2,764	. . .	13,216	613	13,829	1946
1947	5,919	1,675	2,129	99	. . .	†	919	. . .	10,631	110	10,741	1947
1948	5,076	1,025	2,282	77	. . .	. . .	. . .	. . .	8,490	36	8,456	1948
1949	4,449	1,177	2,049	86	. . .	891	. . .	. . .	8,625	27	8,652	1949
1950	4,809	889	3,264	90	. . .	1,214	. . .	. . .	10,109	157	10,266	1950
1951	4,671	897	2,436	20	. . .	1,200	. . .	. . .	9,150	74	9,224	1951
1952	3,489	752	2,318	4	. . .	493	. . .	. . .	7,052	. . .	7,052	1952

Note: — Mild cured Falls not included † Segregation as to district not available.
* Estimated segregation. In 1945 the Silver category includes 200 tierces of Sockeyes.

TROLL SALMON LANDINGS IN OREGON

1952 (Pounds)

Columbia River		Months	Coastal Ports		State Total		Oregon, Total, Both Species
Chinook	Silver		Chinook	Silver	Chinook	Silver	
96,233	...	March	...	...	96,233	...	96,233
229,958	...	April	...	...	229,958	...	229,958
139,354	...	May	5,012	...	144,366	...	144,366
98,162	67,880	June	346,419	99,283	444,581	167,163	611,744
67,243	162,108	July	666,203	635,332	733,446	797,440	1,530,886
115,639	156,573	August	818,008	817,943	933,647	974,516	1,908,163
25,571	88,305	September	255,876	218,358	281,447	306,663	588,110
48,854	51,664	October	44,635	16,028	93,489	69,692	163,181
724,781	526,530	Totals	2,136,153	1,788,944	2,957,167	2,315,474	5,272,641

1951

31,018	...	March	1,354	4,911	32,372	4,911	37,283
141,684	...	April	4,961	...	146,645	...	146,645
84,391	...	May	12,759	...	97,150	...	97,150
29,542	43,982	June	300,981	26,346	330,523	70,328	400,851
75,016	125,756	July	942,379	681,510	1,017,395	807,266	1,824,661
52,326	166,773	August	548,156	430,603	600,482	597,376	1,197,858
48,986	199,393	September	316,936	498,691	365,922	698,084	1,064,006
2,010	53,793	October	8,226	46,035	10,236	99,828	110,064
464,973	589,697	Totals	2,135,752	1,688,096	2,600,725	2,277,793	4,878,518

MILD CURE

Annual OREGON TROLL SALMON LANDINGS

Year	(Pounds) Columbia River Chinook	Columbia River Silver	Coastal Ports Chinook	Coastal Ports Silver	State Total Chinook	State Total Silver	Oregon Total Both	Year
1942	323,769	100,843	320,766	926,936	644,535	1,027,779	1,672,314	1942
1943	157,814	125,618	247,349	534,813	405,163	660,431	1,065,594	1943
1944	457,721	286,637	815,254	1,184,605	1,272,975	1,471,242	2,744,217	1944
1945	1,012,524	231,774	979,105	950,614	1,991,629	1,183,388	3,174,017	1945
1946	1,063,943	478,100	1,522,452	935,182	2,586,395	1,413,381	3,999,776	1946
1947	626,276	598,735	1,948,432	1,278,140	2,574,708	1,876,875	4,451,583	1947
1948	532,788	409,015	984,613	932,557	1,517,401	1,341,572	2,858,973	1948
1949	223,938	163,380	1,136,868	1,126,669	1,360,806	1,290,049	2,650,855	1949
1950	291,386	365,540	731,395	883,407	1,022,781	1,248,947	2,271,728	1950
1951	464,973	589,697	2,135,752	1,688,096	2,600,725	2,277,793	4,878,518	1951
1952*	724,781	526,530	2,136,153	1,788,944	2,957,167	2,315,474	5,272,641	1952

*Total for first 10 months only.

OREGON TRAWL FISH LANDINGS

1952	Pounds Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total 10 Months
Sole													
Petrale	10,937	36,632	87,170	162,389	17,536	154,153	407,996	389,611	147,704	101,120	...	...	1,515,248
English	17,865	67,586	167,803	161,775	26,158	181,317	463,436	300,675	220,822	277,073	...	...	1,884,510
Dover	...	3,210	59,662	268,789	77,344	1,444,180	1,788,965	1,671,212	1,192,002	630,671	...	...	7,136,035
Rex	3,428	20,418	49,558	56,525	15,780	161,818	109,129	77,294	46,655	92,963	...	...	633,568
Turbot	2,300	3,000	15,990	8,270	13,772	55,705	48,870	80,790	19,000	29,000	...	...	276,697
Miscellaneous	4,731	8,350	25,323	11,482	13,000	10,500	25,740	28,753	17,000	36,000	...	...	180,879
Total Sole	39,261	139,196	405,506	669,230	163,590	2,007,673	2,844,136	2,548,335	1,643,183	1,166,827	...	...	11,626,937
Flounders	18,662	20,110	1,741	9,610	84,384	16,039	12,339	1,475	3,797	37,354	...	...	205,511
Cod--Miscellaneous	62	389	4,669	11,909	9,538	62,136	121,000	65,065	55,416	47,783	...	...	377,967
Lingcod	2,286	11,585	47,124	49,804	26,548	60,378	99,453	105,043	66,176	31,572	...	...	499,969
Rockfish	136,981	386,903	769,501	495,640	131,945	286,534	297,521	254,156	421,375	322,322	...	...	3,502,878
Ocean Perch	20,921	109,352	452,071	851,439	13,629	530,842	750,365	355,777	442,402	568,343	...	...	4,095,141
Grand Total	218,173	667,535	1,680,612	2,087,632	429,634	2,963,602	4,124,814	3,329,851	2,632,349	2,174,201	...	...	20,308,403

1951	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total 1952
Sole													
Petrale	11,919	77,196	192,638	258,053	107,325	331,674	639,898	242,535	99,580	61,060	16,214	14,274	2,052,366
English	15,179	154,797	382,105	326,073	76,706	442,041	404,806	324,621	180,337	60,645	21,675	31,348	2,420,333
Dover	...	127	9,876	54,170	446,782	1,640,436	1,881,864	2,137,404	1,597,190	348,959	107,968	2,668	8,227,444
Rex	...	36,649	10,100	8,867	8,322	22,962	114,607	117,563	168,728	46,733	16,243	4,500	555,274
Other	...	4,467	5,761	825	...	78,032	52,557	58,346	55,940	15,721	21,397	11,500	304,546
Total Sole	27,098	273,236	600,480	647,988	639,135	2,515,145	3,093,732	2,880,469	2,101,775	533,118	183,497	64,290	13,559,963
Flounders	50,301	18,884	20,250	21,314	73,219	26,240	14,450	35,944	16,454	12,253	37,792	23,900	351,001
Cod--Miscellaneous	699	365	1,989	22,886	26,157	113,754	134,217	197,538	109,658	53,698	8,711	2,984	672,656
Lingcod	30,533	29,236	52,721	78,142	93,622	182,900	208,144	115,126	66,730	16,105	9,464	4,464	887,187
Rockfish	158,976	245,781	218,402	160,523	242,760	416,420	553,696	381,765	418,182	167,874	158,427	90,664	3,313,470
Ocean Perch	...	14,214	58,460	347,826	232,336	154,378	196,074	297,794	353,176	132,221	...	83,471	1,869,950
Grand Total	267,607	581,716	952,302	1,278,679	1,307,229	3,408,837	4,200,313	3,908,636	3,065,975	915,269	497,891	169,773	20,654,227

PACIFIC COAST FROZEN FISH

YEAR	(Pounds) Halibut	Salmon	Steelhead & Fillets	Sablefish	Miscellaneous	TOTAL	YEAR
1928	20,180,501	23,522,228	1,736,900	3,037,875	3,147,845	51,625,349	1928
1929	23,192,029	20,285,535	1,989,936	2,467,317	3,881,054	51,815,871	1929
1930	21,262,804	20,142,524	1,795,703	3,706,823	4,377,468	51,285,322	1930
1931	19,274,638	18,706,304	1,787,279	2,065,327	3,317,959	45,151,507	1931
1932	14,943,916	19,099,265	1,084,689	1,904,579	1,828,499	38,860,948	1932
1933	21,197,099	21,101,484	1,368,364	1,851,856	2,620,049	48,138,852	1933
1934	25,010,373	25,181,600	1,082,339	2,354,183	3,731,735	57,360,230	1934
1935	22,193,028	27,979,608	695,447	4,158,382	4,288,100	59,314,565	1935
1936	24,483,127	24,168,556	888,677	3,817,582	3,849,238	57,202,180	1936
1937	25,611,959	28,809,866	723,857	5,964,158	4,227,376	65,337,216	1937
1938	26,290,123	29,019,550	794,183	4,608,638	6,091,588	66,804,082	1938
1939	27,884,761	19,812,999	544,865	5,036,206	6 313,548	59,592,379	1939
1940	30,989,043	25,106,033	281,986	5,339,661	8,207,464	69,924,187	1940
1941	32,267,665	23,961,770	93,541	5,019,374	10,963,419	72,305,769	1941
1942	32,334,253	26,256,142	249,336	7,983,957	16,986,000	83,809,688	1942
1943	25,882,523	25,930,418	4,447,875	7,546,624	20,223,179	84,030,619	1943
1944	37,668,595	31,748,145	9,199,424	9,777,304	17,200,082	105,593,550	1944
1945	36,879,253	44,991,950	8,115,197	8,552,441	30,774,204	129,313,045	1945
1946	36,941,548	38,036,107	10,661,450	8,611,842	22,910,725	117,161,672	1946
1947	42,294,602	29,928,104	4,454,941	2,633,912	12,660,753	91,972,312	1947
1948	45,098,451	30,376,166	8,619,585	8,570,289	20,778,163	113,432,654	1948
1949	40,286,125	34,294,242	6,394,213	7,740,630	9,479,721	98,194,931	1949
1950	47,401,296	37,230,172	7,152,856	2,506,826	13,698,707	107,989,857	1950
1951	41,032,442	30,003,546	7,872,151	6,281,413	13,216,333	98,405,885	1951
1952	38,907,883	29,817,889	16,167,000	3,772,951	8,948,115	97,613,838	1952

Note:-Since 1942 Steelheads have been combined with Salmon. Figures given in this column for years after 1942 cover the quantities of frozen fillets of all varieties of fish reported. Data in this table based on individual reports of principals and custom storages to this journal.

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OIL and MEAL

Crippling effect of fish failures, acutely low prices for products, and inability of Canadian fishermen and operators to agree on the price of herring held the Pacific fish reduction industry to a disappointingly low level in 1952.

The dearth of sardines which has beset the Central California industry for several years spread to the Southern California fishery and practically erased oil and meal production in that area in 1952.

BUSINESS built on the reduction of fish and fish-packing waste into technical fish oils and feeding fish meals and solubles suffered an accumulation of heavy blows in 1952.

The California sardine fishery, which only a few years ago yielded heavier catches than any other American fishery resource, experienced the worst failure in its history. This reflected the spreading decline first experienced in the Canadian fishery for this species in 1946.

Another severe reverse resulted from an industrial dispute rather than a biological condition. The British Columbia herring fishermen and operators were unable to agree upon prices for 1952-3 herring, with resulting sacrifice of the entire season—a fishery which last year produced 31,000 tons of meal.

In Alaska the herring fisheries of the Central region suffered a severe failure—the second in a row for Kodiak Island — while Prince William Sound fell far short of the rather encouraging production of 1951; and only Southwest Alaska showed favorable returns. Even in Southeast Alaska the situation was good only to the degree that it was better than expected, not comparing in any respect with the flush returns of other years.

The severity of the decline suffered by the fish reduction industry in 1952 is reflected in the lower yield of oil much more plainly than in meal. Percentage decline in fish oil yield, which fell from 8.4 million gallons in 1951 to 2.4 millions in 1952, was almost twice that of the fish meal drop, which went off from 84 thousand tons in 1951 to 48 thousand in 1952.

This condition traced directly to the fact that the 1952 production was largely from cannery waste — tuna, salmon and mackerel—in which the oil yield is comparatively low. The failures were in the sardine and herring fisheries, which yield much more heavily in oil.

Oil Yield Falls Far

The yield of 2.4 million gallons of fish oil in 1952 was only 10% as

1952 - Pacific Coast Fish Oil and Meal - 1952

Regions and Districts	Fish Meal Tons	Herring Oil Gallons	Sardine or Pilchard Oil Gallons	Other Fish Oil Gallons	Total Fish Oil Gallons	Regions and Districts
ALASKA	4,590	685,467	...	118,000	803,467	ALASKA
BRITISH COLUMBIA	4,764	19,465	...	231,000	250,465	BRITISH COLUMBIA
WASHINGTON	897	...	...	130,000	130,000	WASHINGTON
OREGON	744	...	...	19,000	19,000	OREGON
CALIFORNIA	37,149	...	20,102	1,260,892	1,280,994	CALIFORNIA
GRAND TOTAL	48,144	704,932	20,102	1,758,892	2,483,926	GRAND TOTAL

1952 - CALIFORNIA SARDINE REDUCTION - 1952

Months	San Francisco Area			Monterey Area			San Pedro & San Diego			All Areas Combined		
	Fish Tons	Oil Gallons	Meal Tons	Fish Tons	Oil Gallons	Meal Tons	Fish Tons	Oil Gallons	Meal Tons	Fish Tons	Oil Gallons	Meal Tons
January	...	...	...	...	...	...	1,329	3,126	160	1,329	3,126	160
August	...	...	...	...	...	...	...	...	...	...	...	...
September	...	...	...	...	...	...	...	...	...	...	...	...
October	...	...	...	159	2,001	12	1,683	9,849	116	1,842	11,850	128
November	...	...	...	126	344	2	703	2,650	32	829	2,994	34
December	...	...	...	...	...	...	561	2,132	26	561	2,132	26
Fall Totals	...	...	...	285	2,345	14	2,947	14,631	174	3,232	16,976	188
Grand Total	...	...	...	285	2,345	14	4,276	17,757	334	4,561	20,102	348

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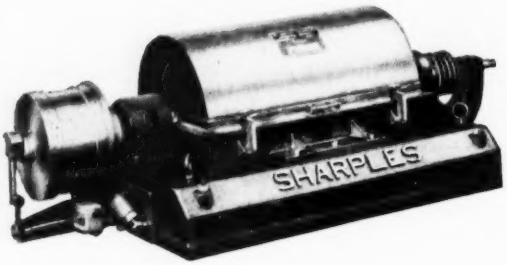

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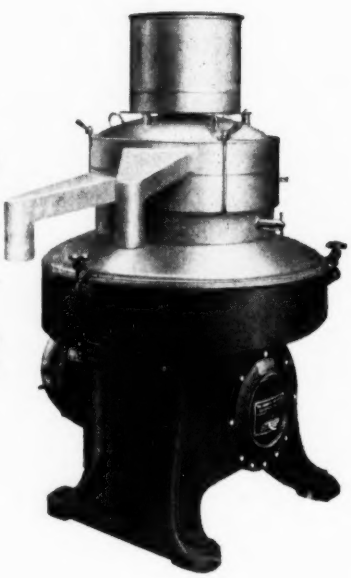

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OIL and MEAL

PACIFIC NORTHWEST FISH BY-PRODUCTS

(Not Including Vitamin Oils)

YEAR	OREGON					WASHINGTON					YEAR
	# Active Plants	Fish Meal Tons	Sardine or Pilchard Oil, Gals.	Other Fish Oils, Gals.	Total Fish Oil, Gals.	# Active Plants	Fish Meal Tons	Sardine or Pilchard Oil, Gals.	Other Fish Oils, Gals.	Total Fish Oil, Gals.	
1952	2	744	...	19,000	19,000	4	897	...	130,000	130,000	1952
1951	2	1,150	...	24,000	24,000	4	1,178	...	164,000	164,000	1951
1950	3	1,260	...	23,085	23,085	5	1,032	...	110,960	110,960	1950
1949	3	...	...	26,700	26,700	5	1,754	...	111,868	111,868	1949
1948	4	1,228	114,928	...	114,928	9	3,269	...	210,923	210,923	1948
1947	4	2,040	228,558	17,626	246,184	8	4,548	44,375	201,863	246,238	1947
1946	3	1,633	120,336	13,391	133,727	10	3,730	186,690	154,733	341,423	1946
1945	3	907	...	26,000	26,000	7	3,542	78,558	158,958	237,516	1945
1944	2	1,200	...	50,000	50,000	5	901	960	64,500	65,460	1944
1943	3	1,365	32,000	26,000	58,000	6	2,901	277,627	78,000	355,627	1943
1942	2	861	25,014	8,200	33,214	6	2,003	27,787	168,600	196,387	1942
1941	4	2,969	398,235	...	398,235	11	4,168	400,102	152,389	552,491	1941
1940	5	592	114,717	...	114,717	11	1,451	35,656	145,174	180,830	1940
1939	6	3,933	833,300	...	833,300	8	4,026	672,066	103,500	775,566	1939
1938	6	2,933	718,830	...	718,830	10	4,986	1,153,339	74,392	1,227,731	1938
1937	5	2,775	689,159	...	689,159	6	3,886	808,396	125,400	933,797	1937
1936	9	2,864	481,512	70,985	552,497	4	1,710	193,467	82,800	276,267	1936
1935	7	4,763	1,104,389	39,985	1,144,374	2	1,032	...	110,960	110,960	1935

great as that of 1944. There can be no better evidence of the severity of the reversal suffered by the business in 1952. It should be recognized, of course, that a substantial part of this drop was man-made, resulting from the failure of the Canadian herring industry to come to an agreement on fish prices which would permit operations.

At the peak of Pacific fish oil production in 1936, the yield was 31.99 million gallons, and the average yield through the middle '30s was above 25 million.

Fish Oil and Meal Business Is Hard Hit

The business of manufacturing fish oils for technical purposes and fish meals for feeding chickens and livestock suffered an accumulation of staggering reverses in 1952.

The going had been hard hit in this division of the Pacific fishery industry for several season, but it remained for 1952 to bring a climax of failure which was felt along the whole coastline of North America from Kodiak Island to Southern California.

The Alaska herring fishery failed as it never had before; British Columbia's herring industry, which has had such abundant production for years, was completely stalemated through the fall season by inability of the fishermen and operators to agree on price; the pilchard or sardine fishery of Vancouver Island, Washington, Oregon, and Central California again was a complete blank.

In Southern California, which with British Columbia has been the mainstay of the fishery for a number of years, the sardine catch was limited

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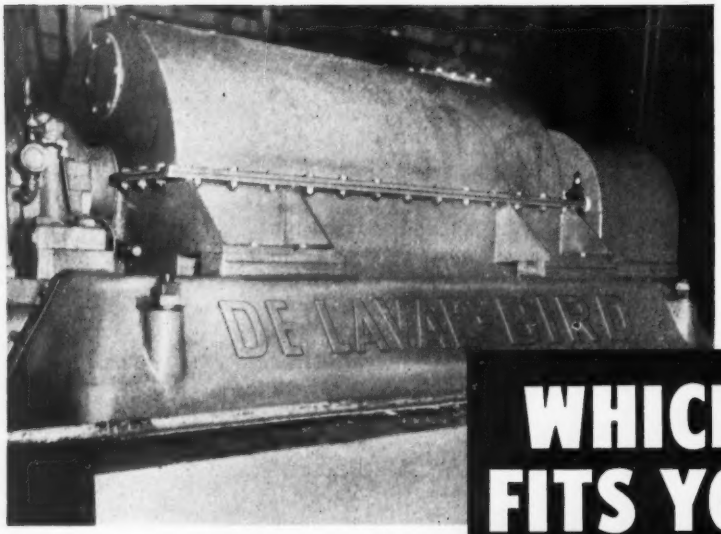
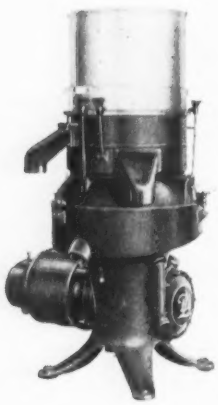
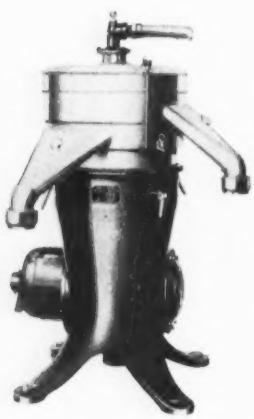


WHICH MACHINE FITS YOUR PLANT?



DE LAVAL-BIRD CONTINUOUS MEAL RECOVERY CENTRIFUGE

One De Laval-Bird Continuous Meal Recovery Centrifuge will do the work of 3 or 4 smaller machines! These sturdy horizontal type centrifuges are designed to separate fish meal from press liquor in the most efficient manner. They recover a maximum of high protein fish meal . . . of low oil content . . . thus yielding a maximum of profit to the operator. They save space, reduce first-cost expense and minimize maintenance. De Laval-Bird Continuous Meal Recovery Centrifuges are available in sizes capable of handling 3,000, 6,000 and up to 10,000 gallons per hour of press liquor.



DE LAVAL MODEL AC-VO "NOZZLE-MATIC"® SEPARATOR

De Laval Model AC-VO "Nozzle-Matic" Separators in combination with De Laval-Bird Continuous Meal Recovery Centrifuges yield a maximum quantity of highest quality oil. The "Nozzle-Matic" is continuous in operation and turns out oil-free stick water for concentration into fish solubles. The capacity of this three-way separator on this type of work usually runs between 2,000-3,000 gallons per hour.

DE LAVAL FISH OIL PURIFIERS

These machines achieve final purification and polish of the oil. When fish oil is discharged from this final centrifuging operation it is clean and bright and entirely free of moisture. The dehydration is complete because the bowl of the De Laval centrifuge applies centrifugal force in the most efficient manner possible.

Capacities vary greatly according to the type of oil being centrifuged. The same machine may do 50—400 gph on one operation and 1,200 gph on another. Consult a De Laval representative.

DE LAVAL PACIFIC COMPANY • 61 Beale Street, San Francisco 5, California

DE LAVAL fish oil separators

California Fish Oil and Meal Production

YEAR	FISH MEAL, TONS					FISH OIL, GALLONS				
	San Francisco District	Monterey District	San Pedro District	San Diego District	TOTAL Tons	San Francisco District	Monterey District	San Pedro District	San Diego District	TOTAL Gallons
1930	3,375	13,752	13,653	4,859	35,639	747,931	3,769,950	1,282,893	41,989	5,842,763
1931	3,597	8,416	7,600	2,877	22,440	726,514	2,372,303	818,364	7,511	3,924,692
1932	2,435	12,560	9,846	2,659	27,500	426,831	3,378,929	1,293,961	25,678	5,125,399
1933	4,941	18,869	18,249	4,310	46,369	933,696	4,209,366	2,585,784	58,948	7,787,794
1934	11,138	34,492	27,236	4,858	77,724	2,490,156	9,322,080	4,221,447	94,525	16,128,208
1935	12,994	27,966	31,163	6,572	78,695	3,106,785	6,734,305	3,821,566	261,482	13,924,138
1936	24,593	30,431	23,588	7,655	86,267	5,626,422	6,756,541	2,834,887	260,059	15,477,909
1937	22,916	21,118	29,184	8,300	81,518	4,431,668	4,122,817	2,578,600	191,757	11,324,842
1938	31,773	25,202	24,209	6,732	87,916	7,032,792	4,753,160	2,126,661	130,606	14,043,219
1939	43,369	33,238	21,858	6,704	105,169	10,395,398	6,894,201	1,594,122	96,806	18,980,527
1940	21,256	28,004	29,542	7,335	86,137	4,831,500	5,745,120	2,509,291	129,079	13,214,990
1941	32,773	38,875	25,832	5,332	102,812	7,429,493	7,537,870	2,627,959	81,876	17,677,198
1942	17,748	25,170	31,633	4,452	79,003	4,183,492	5,219,441	3,146,680	137,027	12,686,640
1943	10,682	37,416	24,753	4,300	86,151	4,979,798	6,652,715	2,262,889	120,777	14,016,179
1944	24,452	42,452	34,945	5,283	107,132	5,722,966	8,509,678	3,903,785	133,356	18,269,785
1945	16,177	26,105	29,822	6,549	78,653	3,778,814	5,145,907	2,948,595	188,795	12,062,111
1946	1,597	6,572	36,859	7,867	52,895	72,089	922,103	3,641,810	266,623	4,902,625
1947	837	4,453	22,555	9,920	37,065	17,869	497,271	1,795,095	323,369	2,633,604
1948	371	8,061	24,677	11,341	44,450	20,382	924,048	1,529,447	354,320	2,833,197
1949	3,828	21,515	29,693	11,468	66,504	603,178	3,390,112	2,267,436	330,508	6,591,234
1950	3,448	8,101	48,157	11,063	70,769	534,691	1,343,801	4,950,373	373,265	7,202,130
1951	981	3,229	27,114	10,174	41,498	20,730	416,309	1,959,109	339,442	2,735,590
1952	...	14	334	...	348	...	2,345	17,757	...	20,102

NOTE: — This table includes all fish oil except vitamin oils from livers, and includes oil from fish plant offal as well as from whole fish. Meal figures include solid residuum recovered from stockwater. The San Francisco district as reported covers all California north of Monterey Bay.

to a few hundred tons, where formerly it ran to hundreds of thousands of tons.

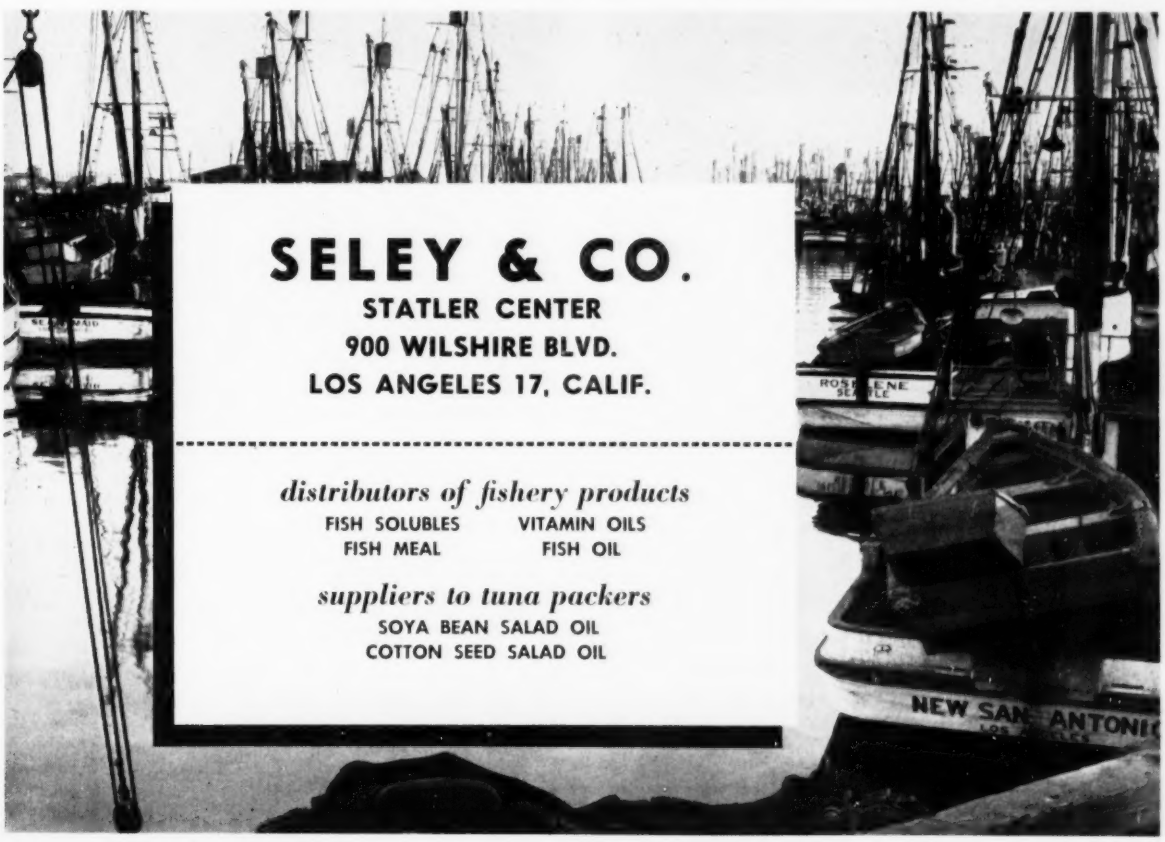
Tuna By-Products Only Normal Item

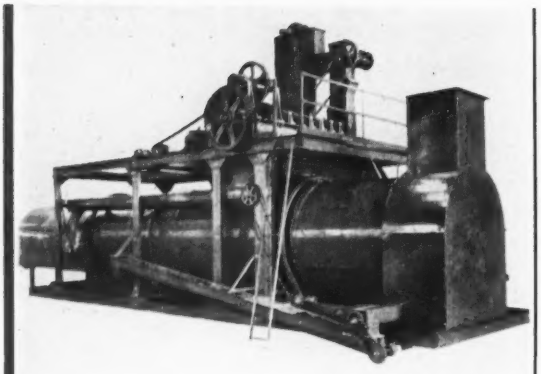
Only in the division of tuna by-products did 1952 produce on a normal scale. Other marine products were far down from the usual supply.

Compounding the catastrophic character of the fishery failures was the ruinous level of fish and oil prices—while meal sold at a relatively depressed level reduced by the general decline in feedstuffs.

In fish oil, however, the price decline was a crushing one; and it was this factor which was basically responsible for closing-down the British Columbia herring industry during the 1952 fall season. Operators simply could not pay the fishermen the prices they insisted upon and sell their oil in a market on the order of 7 to 8c per lb.

Production of fish oils and meals were sharply down in British Columbia in 1952, chiefly because of disa-





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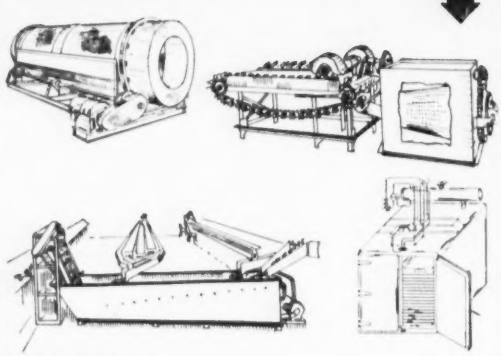

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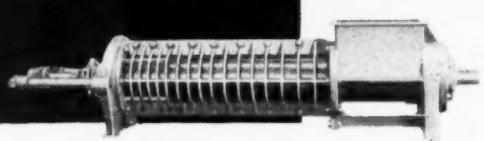

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Built in 7 models for capacities ranging from 1 to 18 tons per hour.

Enterprise Process Machinery

BRITISH COLUMBIA FISH BY-PRODUCTS

(Not including vitamin oils).

Year	Number of Active Plants	Fish Meal Tons	Herring Oil Gallons	Sardine or Pilchard Oil Gallons	Other Fish Oils Gallons	Total Fish Oils Gallons	Year
1935	11	12,488	116,320	1,951,328	258,131	2,325,779	1935
1936	12	17,578	667,579	1,411,331	343,042	2,421,952	1936
1937	12	22,011	1,230,960	2,026,662	354,450	3,612,072	1937
1938	15	17,079	689,630	2,513,990	282,569	3,486,189	1938
1939	15	17,534	1,383,341	199,957	298,681	1,881,979	1939
1940	14	32,216	2,131,797	1,052,912	252,259	3,436,968	1940
1941	16	16,494	599,885	1,845,164	...	2,445,049	1941
1942	16	22,814	686,516	1,309,793	456,013	2,452,322	1942
1943	16	29,109	814,156	2,554,996	308,500	3,677,652	1943
1944	15	20,852	1,018,597	2,373,013	156,812	3,548,422	1944
1945	15	21,123	1,344,461	1,307,211	223,651	2,875,323	1945
1946	13	9,469	896,615	88,718	293,486	1,278,819	1946
1947	17	12,773	1,551,165	...	227,162	1,778,327	1947
1948	20	29,636	3,178,607	...	172,368	3,350,976	1948
1949	23	31,419	2,723,884	...	156,335	2,880,219	1949
1950	20	34,174	3,677,024	...	338,000	4,015,024	1950
1951	20	34,235	3,835,136	...	252,000	4,087,136	1951
1952	20	4,764	19,465	...	231,000	250,465	1952

greement between operators and fishermen over the price to be paid for raw fish. Prolonged stalemate resulted, and for that reason the actual catch of herring during the usually active Fall and early Winter period was insignificant, being limited to a few small vessels engaged in fishing for the salteries.

When the time came for negotiating a new price agreement for the 1952-53 operation, the operators of reduction plants felt convinced that they could not afford to offer the same prices that had prevailed during the previous season, because there had been a sharp break in world prices of fish oil and the fish meal market, while more stabilized, was at lower levels than in 1951-52.

The first offer from the operators was $6 a ton. This was made at the beginning of the season when the oil content of the herring was usually at its peak. The fishermen turned it down, and subsequently the operators reduced the original offer to $5.50 because of the presumably reduced oil content in the fish. This, too, was rejected and the fishermen asked the provincial government to intervene with arbitration proceedings. However, since only one company had actually been licensed to operate during the season at the time the request for arbitration was made, this move proved abortive.

The operators had refused to submit the issue to arbitration anyway, arguing that it would be a dangerous precedent for industry. At the turn of the year the deadlock continued.

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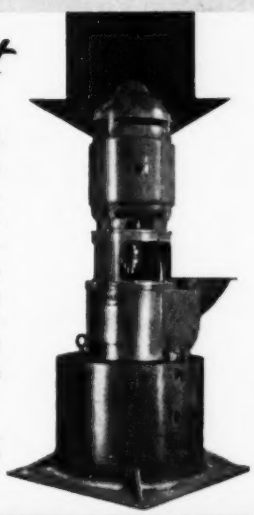
for a fast, uniform grind

... at low cost



ENTERPRISE HAMMER MILLS provide high continuous grinding capacities at lowest cost per ton. Simplicity and compactness of vertical design provide 360° grinding area. Heavy-duty construction, and accessibility to screens and rotors, combine to give best results in reduction operations of every type. *Write for complete information.*

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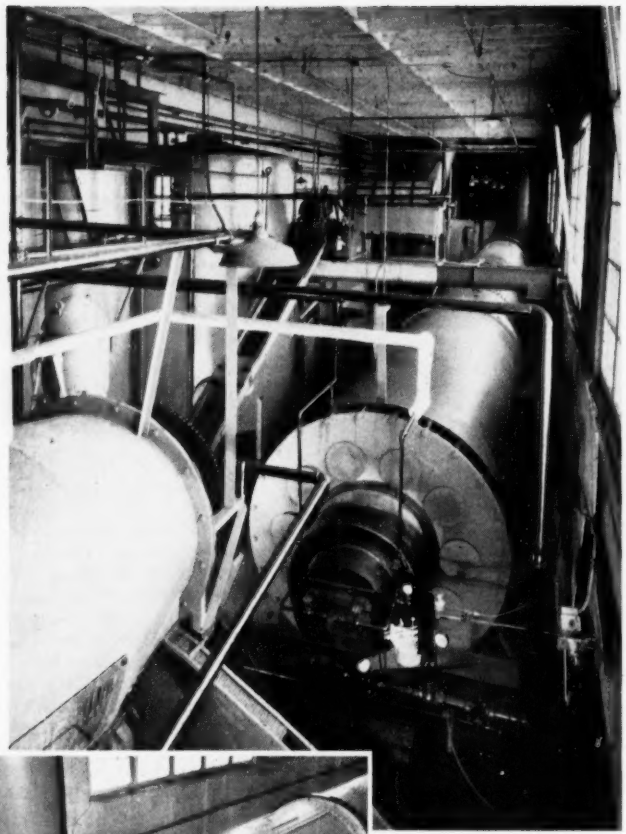
Low Temperature Drying of Fish Meal



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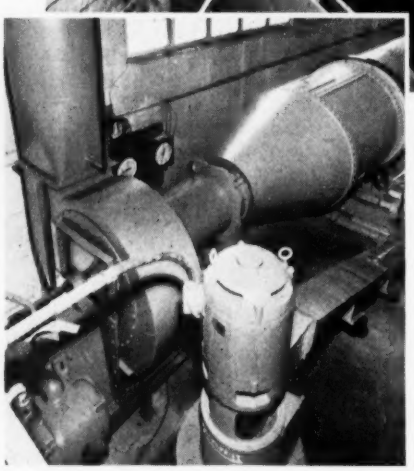
A new and more efficient method of drying fish meal! As you might expect, it is a *Standard* development. For Standard has maintained its position of leadership in the fish processing industry for nearly half a century by consistently being first with the latest.

2% TO 5% PROTEIN GAIN—2½% MEAL GAIN

By actual laboratory tests, Standard's low temperature drying increases protein values at least 2% and yield of meal 2½%. Particles never heated above 160° F. – no scorching – no burnt odors. *Write today* for full descriptive literature on low temperature drying and Standard Fish Meal and Oil Plants, Fish Canneries, Component Parts. World-wide installation and service.



(Above) Standard Low Temperature Fish Meal Dryer in operation at Pan Pacific Fisheries, Inc., Terminal Island, California.

(Left) Dryer discharge end. All fish meal is removed from dryer through the fan for additional drying while being air-conveyed to cyclone.

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Retorts — quick closing doors

Conveyor type packing tables

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Cyclones and sacking equipment

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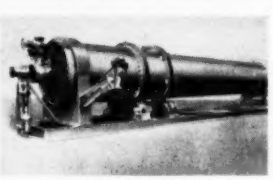

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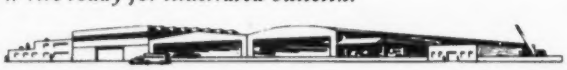

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Atlantic Coast Fisheries Co., J. R. Perry ..... Monterey
Brucia, J. B. ..... Moss Landing
California Frozen Fish Company, Sal Ventimiglia ..... Monterey
California Packing Corp., Don T. Saxby (2 plants) ..... Monterey
Carmel Canning Co., J. R. Perry ..... Monterey
Del Vista Packing Co., W. O. Lunde ..... Monterey
Edgewater Packing Co., C. J. Broad ..... Monterey
Enterprise Packers, Sebastian Sollecito ..... Monterey
Hovden Food Products Corp., K. Hovden (2) ..... Monterey
Hovden Food Products Corp., K. Hovden (2) ..... Moss Landing
Lucido Fisheries, C. D. Day ..... Monterey
Magnolia Packing Co., W. B. Hornblower ..... Monterey
Monterey Canning Co., Magnus Flause ..... Monterey
Monterey Fish Products, Inc., Frank Lucido (3) ..... Monterey
Moss Landing Fisheries, F. J. Arnone ..... Moss Landing
Oxnard Canners, S. A. Ferrante (2) ..... Monterey
Peninsula Packing Co., G. M. Dollar (2) ..... Monterey
Pacific Vegetable Oil Corp., Frank Richey ..... Moss Landing
San Carlos Canning Co., C. D. Day (2) ..... Monterey
Santa Cruz Canning Co., Joe Olivieri ..... Moss Landing
Santa Inez Fisheries, Inc., Wm. C. Morehead ..... Moss Landing
San Xavier Fish Packing Co., F. E. Raiter ..... Monterey
Sea Beach Packing Co., Sal Palma ..... Monterey
Sea Wolf Packing Co., Viggo Paulsen ..... Moss Landing
Western Sardine Co., Inc., Joe DiMaggio ..... Monterey
Westgate-Sun Harbor Co., Paul Jepson ..... Monterey

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Cargill, Inc., Wm. F. Drum ..... San Francisco
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Collett, Week & Nibecker, E. F. Week, Jr. ..... Burlingame
Crown By-Products Co. ..... San Jose
Cypress Fisheries, W. L. Martignoni ..... Pt. San Pablo
East Bay Fisheries, F. J. Mullins ..... Pt. San Pablo
Edible Fish Meals & Oils, Alex Imlach ..... Pt. San Pablo
Fish-Dee-Lish Corp., N. F. Roesling ..... Pt. San Pablo
Fish Packers, Inc., Mrs. Pearl Kirchmann ..... McNear's Pt.
Golden State Fisheries, C. J. Garibotti ..... Benicia
Grader Marine By-Products Co., W. F. and H. B. Grader ..... Ft. Bragg
Elwyn C. Hale Fisheries, Mrs. Mabel E. Hale and Elwyn C. Hale (2 plants) ..... Antioch
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J. D. Packing Co., J. A. Davi and Gus Bruno ..... San Francisco
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Lansing Fisheries, W. L. Martgnoni ..... San Francisco
Nopco Chemical Co., J. A. Reynolds ..... Richmond
Northern Packing Corp., Geo. Christo ..... San Francisco
Old Capitol Packers, Inc., N. F. Roesling ..... McNear's Pt.
Ozal Packing Co., Frank Mezin ..... Ozol
Pt. Edith Fisheries, Inc., Charles Cohn ..... Port Chicago
Polarine Fisheries, Inc., E. T. Meakin ..... Pt. San Pablo
Red Rock Fisheries, Inc., J. H. Dempsey (2) ..... Pt. San Pablo
Redondo Fish Prod. Co., Jack Cardinalli (2) ..... Pt. San Pablo
Romeo Packing Co. ..... Half Moon Bay
Royal Soap & Tallow Co., L. Martinelli ..... San Francisco
Sardine Fisheries, Ltd., Frank Mezin ..... Ozol
Seine Sea Food Pkg. Co., John Costanza ..... Port Costa
Smith-Ferrari Fish Meal Co., T. J. Ferrari ..... Chester
Tamalpais Fishing & Packing Co., J. J. Dorsey (2) ..... Pt. San Pablo
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Winged Victory Fish Prod. Corp., Geo. J. Christo ..... San Francisco

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French Sardine Co., Joseph J. Bogdanovich (2) ..... Terminal Island
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Lido Fisheries, Nick Kovacevich ..... Long Beach
Pan-Pacific Fisheries, Inc., Gerald Cigliana ..... Terminal Island
South Coast Fisheries, Inc., Peter A. Kuglis ..... Terminal Island
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Southern Calif. Fish Corp., H. P. Christian ..... Terminal Island
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However, the companies extended their price offer of $5.50 a ton to any fisherman who wished to operate during the balance of the season, usually running into mid-March and there was slim prospect that, after the long layoff, some fishermen would decide to resume operations.

During the first two and a half months of the calendar year 1952 production of herring oil in the province was 1,428,000 Imperial gallons; of meal, 16,222 tons.

Inactivity of the herring fishery in late 1952 resulted in a serious economic loss to the industry because in the previous year the total value of herring products had been some $11,000,000. While, owing to decline in market, the over-all value of the output would not have been as great in 1952 even if the volume had been equal to the previous season's, it would have been an important contribution. Herring has usually run second only to salmon as a source of fisheries revenue in British Columbia.

Apart from the unemployment and the dollar loss represented by the herring tieup, salesmen for the industry feared that the curtailment of production would indirectly affect the business for the long term inasmuch as it would favor substitute oils and meals at a time when the latter are becoming increasingly competitive.

Herring Industry Hit By Serious Failure

Alaska herring operations in 1952 were closely curtailed by the high demands of the fishermen's union. As result operations were limited to six plants:

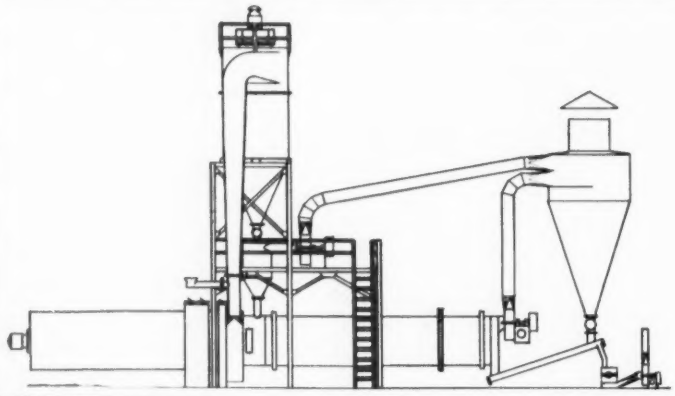
Kodiak Island — Wakefield Fisheries, Port Wakefield.

Prince William Sound — Alaska Fishermen's Cooperative, LaTouche; Oceanic Fisheries Co., Port Oceanic.

Southeast Alaska — Buchan & Heinen Packing Co., Port Armstrong; Storfold & Grondahl Packing Co., Washington Bay; Oceanic Fisheries Co., Port Conclusion.

The Kodiak Island fishery was a flat failure, the only fish secured in any quantity had to be hauled excessive distances.

On Prince William Sound, where for years the summer run of fish has



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IMPORT ANALYSIS

ALASKA FISH BY-PRODUCTS

(NOT INCLUDING VITAMIN OILS)

Year	Southeast Alaska			Prince William Sound			Kodiak Island Area			All Alaska		
	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons	Number Active Plants	Fish Oils, Gallons	Fish Meal, Tons
1952	5	*	*	2	*	*	**2	*	*	9	803,467	4,590
1951	5	527,092	2,439	4	803,773	3,600	**5	109,000	632	14	1,439,865	6,671
1950	4	593,720	2,694	4	847,950	3,305	**4	1,581,514	7,695	12	3,033,184	13,694
1949	5	651,186	3,269	1	...	140	**3	16,900	199	9	686,086	3,608
1948	8	623,814	2,631	4	919,437	2,974	**7	1,959,378	7,078	19	3,501,631	12,483
1947	8	1,762,648	6,727	...	...	...	6	2,017,027	7,505	14	3,779,675	14,232
1946	5	1,359,409	6,860	2	453,962	2,066	4	1,731,536	6,942	11	3,544,907	15,868
1945	5	1,110,973	4,507	2	295,951	1,541	4	1,328,249	5,140	11	2,835,173	11,188
1944*	...	...	...	...	...	...	...	...	...	8	2,355,010	8,777
1943*	...	...	...	...	...	...	...	...	...	8	1,644,142	7,280
1942	1	60,000	700	1	62,518	270	2	770,000	2,570	4	892,518	3,540
1941	1	80,500	555	6	1,221,242	5,408	4	1,592,506	5,777	11	2,894,248	11,740
1940	1	40,000	450	6	1,290,857	4,720	3	808,822	2,973	11	2,139,679	8,143
1939	5	882,317	4,042	7	2,227,087	7,838	6	1,729,127	5,617	18	4,846,631	17,497
1938	6	951,109	4,489	6	2,403,797	8,847	4	1,224,273	3,637	16	4,593,579	16,973
1937	9	2,024,315	8,725	6	2,175,423	7,102	5	1,388,300	3,809	20	5,588,038	19,636
1936	6	1,421,470	6,487	6	1,426,323	5,546	5	975,344	3,018	17	3,823,137	15,051
1935*	...	...	...	...	...	...	...	...	...	19	3,853,243	15,818

*Data for separate areas of Alaska not available.

**Includes one on Cook Inlet.

proven thoroughly dependable, these herring failed utterly to show, with the result that production was negligible and the operators did not remain for the fall run, which has not materialized for several seasons.

Southeast Alaska Herring Fishing Much Better

The vagaries characteristic of the Alaska herring were plainly demonstrated in the summer of 1952, when Southeast Alaska experienced much better fishing than had been expected, filling the 100,000-bbl. quota by August 1, when the quota regulations was rescinded by the Fish and Wildlife Service.

The run of fish, while surprising, was not good enough to make an economically successful season, as the guaranteed price of fish was so high and the price of products so low that losses were general.

The fish price for 1952 was 20c per bbl. per man, or fishermen's shares of 20% of the gross sales price of the products of a barrel, whichever was the greater.

Southeast Alaska Winter Herring Fishing Permitted

In the fall of 1952 the Fish and Wildlife Service amended the Alaska fishery regulations to permit winter fishing for herring in the extreme southern part of Southeast Alaska.

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PACIFIC COAST FISH REDUCTION PRODUCTS

Fish Oil — Fish Meal

Fish Oil (Gallons)						Year	Fish Meal (Tons)					
Alaska	Wash.	Oregon	Calif.	British Columbia	TOTAL		Alaska	Wash.	Oregon	Calif.	British Columbia	TOTAL
232,376	116,282	20,000	26,063	...	394,721	1916	1,594	...	100	535	...	2,229
231,142	205,511	25,000	176,293	49,784	686,730	1917	1,858	3,186	190	3,481	1,230	9,935
147,716	98,711	35,200	346,724	64,060	692,411	1918	600	1,885	95	8,734	1,977	13,291
170,340	90,921	25,000	514,262	65,945	866,468	1919	1,218	1,114	350	11,153	1,847	15,682
720,118	21,850	23,175	611,585	66,802	1,443,530	1920	3,928	352	136	8,856	466	13,738
99,948	170,008	48,000	336,738	53,640	708,334	1921	678	1,354	300	6,317	489	9,138
454,938	157,555	14,000	547,050	90,553	1,264,096	1922	1,958	1,216	40	9,027	911	13,152
915,143	135,145	24,000	951,888	196,381	2,242,557	1923	3,635	992	150	9,238	823	14,838
1,193,705	79,028	42,000	2,350,722	289,651	3,955,106	1924	5,560	607	275	15,328	1,709	23,479
2,391,832	97,890	47,400	3,150,041	1,020,607	6,707,770	1925	9,302	1,395	300	22,936	4,551	38,484
3,018,675	78,352	58,000	2,123,928	2,555,485	7,834,440	1926	12,093	822	325	15,767	10,543	39,550
2,067,041	81,801	65,000	2,618,490	3,863,347	8,695,679	1927	7,704	956	500	21,374	16,659	47,193
2,585,990	79,347	54,000	3,749,302	4,877,059	11,336,698	1928	10,713	670	425	28,390	15,331	55,529
3,415,154	131,059	62,000	6,548,126	4,066,584	14,222,923	1929	13,353	1,554	460	43,496	21,208	80,071
3,601,305	121,602	53,600	5,842,763	4,767,120	14,386,390	1930	12,847	1,046	400	36,276	17,542	68,111
2,207,686	128,769	36,000	3,924,692	3,485,287	9,782,434	1931	8,704	714	228	22,440	19,561	51,647
2,632,154	79,219	33,000	5,125,399	1,857,065	9,726,837	1932	10,168	757	143	27,500	15,450	54,018
3,195,294	111,098	33,500	10,708,448	935,582	14,983,922	1933	11,435	1,085	210	58,879	6,752	78,361
3,741,604	116,967	38,000	18,910,687	2,492,230	25,299,488	1934	14,341	876	280	95,193	12,654	123,344
3,853,243	110,960	1,144,374	20,695,423	2,644,214	28,448,214	1935	15,818	1,032	4,763	103,772	16,090	141,475
3,823,137	304,975	552,497	24,511,950	2,802,678	31,995,237	1936	15,051	1,687	2,864	126,143	21,948	167,693
5,588,038	942,548	689,159	14,823,508	3,942,576	25,985,829	1937	19,636	4,012	2,775	93,897	25,630	145,950
4,587,513	1,231,144	718,830	16,065,029	4,023,798	26,626,314	1938	17,066	4,977	2,933	97,451	21,006	143,433
4,837,298	830,480	833,300	18,980,527	2,068,779	27,550,384	1939	17,477	4,651	3,933	105,169	19,468	150,698
2,142,674	180,830	114,717	13,214,990	3,388,442	19,041,653	1940	8,144	1,528	592	86,137	31,899	128,300
2,894,248	552,491	398,235	17,677,198	3,304,657	24,290,751	1941	11,740	4,168	2,969	102,812	24,312	146,001
892,518	144,691	33,214	12,686,640	2,255,908	16,012,971	1942	3,540	1,608	861	79,003	26,474	111,486
1,644,142	586,102	58,000	14,016,179	3,738,818	20,043,241	1943	7,280	3,231	1,365	86,151	24,919	122,946
2,355,010	65,460	50,000	18,271,859	3,548,422	24,290,751	1944	8,777	901	1,200	96,853	20,852	128,583
2,835,173	221,218	26,000	12,062,111	2,875,323	18,019,825	1945	11,188	2,894	907	78,653	21,123	114,769
3,544,907	341,423	133,727	4,902,625	1,431,600	10,354,282	1946	15,869	3,826	1,633	52,895	10,561	84,784
3,779,675	200,801	246,184	2,633,604	1,778,327	8,415,449	1947	14,232	1,631	2,040	37,065	12,773	62,611
3,501,631	210,923	114,928	2,833,197	3,427,273	10,087,952	1948	12,683	3,269	1,228	44,450	31,087	92,717
668,086	207,000	26,700	6,725,255	2,880,219	10,507,260	1949	3,608	3,200	1,786	66,504	31,419	106,517
3,033,184	110,960	23,085	7,202,130	4,015,024	14,384,383	1950	13,694	1,032	1,260	70,769	34,174	120,929
1,439,865	164,000	24,000	2,735,590	4,087,136	8,450,591	1951	6,671	1,178	1,150	41,498	34,235	84,732
803,467	130,000	19,000	1,280,994	250,465	2,483,926	1952	4,590	897	744	37,149	4,764	48,144

This was permitted by way of providing the means for a test of the feasibility of winter fishing such as that which the Canadians have developed in the northern portion of the province for many years.

The Alaska By-Products Co. mounted a two-boat operation with its plant at Wards Cove, and by presstime had found some relatively encouraging fishing.

The Federal research vessel *John N. Cobb* also undertook an exploratory and experimental fishing project with the assistance of the industry in an effort to provide a confirming test of the feasibility of this winter fishery.

Sardine Reduction Hits All-Time Low Mark

With almost complete failure of the 1952-53 sardine season, both in Northern and Southern California, production of fish oil and meal was naturally far below the previous season. However, for 1952 production of miscellaneous meal and oil—mostly from tuna and mackerel—was considerably above 1951.

Southern California produced most of the meal and oil. The total for all of California for 1952, to December 1, miscellaneous was: meal, 33,802 tons; oil, 1,116,041 gals. For 1951 the miscellaneous production was: Meal, 23,729 tons; oil, 719,968 gals.

The sardine meal and oil was, of course, practically blank. For all of California, with December estimated, only around 400 tons of meal had been turned out, to just about 30,000 gals. of oil.

The California 1951-52 ended February 2, with 10,701 tons, meal; 1,075,913 gals., oil. Opening quotations, January 1 for meal at Los Angeles—with practically none offered—was $146.90. (65%) per ton. It closed the year at the same price. Oil was quoted at the close of 1951 at 12½-13c; it closed 1952 at 8-8½c.

One interesting highlight of the year was the application granted by the Fish and Game Commission to a Monterey packer to take and reduce 100 tons of anchovies as an experiment. No other applications were granted—nor was the experiment extended to Southern California. Anchovies do not pass well through re-

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PACIFIC COAST SARDINE OR PILCHARD CATCH

(EACH SEASON INCLUDES JUNE THROUGH THE FOLLOWING MAY.)*

SEASON	(Tons) British Columbia	Washington	Oregon	TOTAL Pacific Northwest	CALIFORNIA Floating Plants	San Francisco	Monterey	San Pedro	San Diego	TOTAL California	GRAND TOTAL	Calif. % of Total
1916-17	. . .	. . .	. . .	. . .	. . .	. . .	7,710	17,380	2,440	27,530	27,530	100
1917-18	80	. . .	. . .	80	. . .	70	23,810	41,340	7,360	72,580	72,660	100
1918-19	3,640	. . .	. . .	3,640	. . .	450	35,750	32,530	6,810	75,540	79,180	95
1919-20	3,280	. . .	. . .	3,280	. . .	1,000	43,040	16,580	6,410	67,030	70,310	95
1920-21	4,400	. . .	. . .	4,400	. . .	230	24,960	11,740	1,520	38,450	42,850	90
1921-22	990	. . .	. . .	990	. . .	80	16,290	19,220	910	36,500	37,490	97
1922-23	1,020	. . .	. . .	1,020	. . .	110	29,210	33,170	2,620	65,110	66,130	98
1923-24	970	. . .	. . .	970	. . .	190	45,920	35,040	2,780	83,930	84,900	99
1924-25	1,370	. . .	. . .	1,370	. . .	560	67,310	96,330	8,820	173,020	174,390	99
1925-26	15,950	. . .	. . .	15,950	. . .	560	69,010	61,990	5,710	137,270	153,220	90
1926-27	48,500	. . .	. . .	48,500	. . .	3,520	81,860	64,720	2,110	152,210	200,710	76
1927-28	68,430	. . .	. . .	68,430	. . .	16,690	98,020	67,900	4,650	187,260	255,690	73
1928-29	80,510	. . .	. . .	80,510	. . .	13,520	120,294	119,250	1,420	254,484	334,994	76
1929-30	86,340	. . .	. . .	86,340	. . .	21,960	160,050	140,540	2,620	325,170	411,510	79
1930-31	75,070	. . .	. . .	75,070	10,960	25,970	109,620	38,490	80	185,120	260,190	71
1931-32	73,600	. . .	. . .	73,600	31,040	21,610	69,080	42,660	260	164,650	238,250	69
1932-33	44,350	. . .	. . .	44,350	58,790	18,630	89,600	83,600	60	250,680	295,030	85
1933-34	4,050	. . .	. . .	4,050	67,820	36,340	152,480	125,050	1,750	383,440	387,490	99
1934-35	43,000	. . .	. . .	43,000	112,040	69,000	230,860	178,820	4,860	595,580	638,580	93
1935-36	45,320	. . .	26,230	71,550	150,830	76,150	184,470	138,400	10,650	560,500	632,050	89
1936-37	44,450	6,550	14,200	65,200	235,610	141,100	206,710	138,110	4,590	726,120	791,320	92
1937-38	48,080	17,200	16,660	81,940	67,580	133,720	104,930	109,950	380	416,560	498,500	84
1938-39	51,770	26,480	16,990	95,240	43,890	201,200	180,990	146,400	3,780	575,260	670,500	86
1939-40	5,520	17,850	22,330	45,700	. . .	212,450	227,870	101,820	110	542,250	587,950	92
1940-41	29,660	820	3,200	33,680	. . .	118,090	165,700	175,590	1,200	460,580	494,260	93
1941-42	60,460	17,090	16,500	94,050	. . .	186,590	250,290	148,910	1,580	587,370	681,420	86
1942-43	65,880	570	1,880	68,330	. . .	115,880	184,400	201,510	2,870	504,660	572,990	88
1943-44	83,740	10,540	1,820	96,100	. . .	126,510	213,620	135,310	2,690	478,130	574,230	83
1944-45	53,380	20	. . .	53,400	. . .	136,600	237,250	178,290	2,770	554,910	608,310	91
1945-46	34,300 *	2,390	90	36,780	. . .	84,100	145,520	173,110	950	403,680	440,460	92
1946-47	3,990	6,140	3,901	14,040	. . .	2,870	31,240	194,720	4,770	233,600	247,640	94
1947-48	500	1,357	6,925	8,782	. . .	383	14,492	92,950	2,412	110,237	119,019	93
1948-49	. . .	. . .	5,506	5,506	. . .	1,688	52,203	124,410	2,940	181,241	187,334	97
1949-50	. . .	. . .	. . .	. . .	. . .	17,798	133,570	184,327	2,065	337,760	337,760	100
1950-51	. . .	. . .	. . .	. . .	. . .	14,728	53,023	284,989	2,420	355,160	355,160	100
1951-52	. . .	. . .	. . .	. . .	. . .	321	24,864	101,343	13	126,541	126,541	100
1952	. . .	. . .	. . .	. . .	. . .	. . .	285	4,276	. . .	4,561	4,561	100

These records of catch have been supplied by the Canadian Bureau of Statistics and the Province of British Columbia, the Washington Department of Fisheries, the Fish Commission of Oregon, the California Division of Fish and Game, and for the floater catch by the United States Fish and Wildlife Service.

* Figures in the final line of the table are for the calendar year 1952, and include fish caught early in the year. San Diego landings for 1952 included with the San Pedro area.

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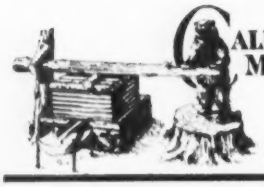

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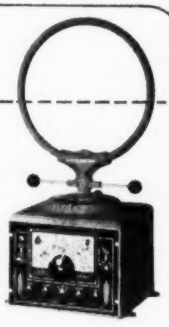

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duction system, have little oil and produce a low quality of meal.

Technological Improvements

From the standpoint of plant improvement, the outstanding example was that of the modernization of French Sardine Company's reduction plant, Plant No. 1, Terminal Island. This was completed in mid-1952 under the supervision and planning of Nicholas F. Trutanic, production manager.

Basis of improvement was total conversion to low-temperature drying for producing a better quality of meal. The new installation had as its basis a Crews LoTemp unit for drying tuna, mackerel and sardine material, the system not permitting individual meal particles to go over 150 degrees, F.

First stage is flash drying by high velocity air. Between first and second stages there is an air flotation classifier diverting dry fines to the cooling phase while the coarser unfinished meal drops into rotary drier.

Important advantage is that dry fines are in the drying process less than one minute. In the second stage, meal with moisture content about 25%, is passed through a "detention drier," which is a modified rotary.

New equipment installed included—this for the initial time in a Pacific Coast fish reduction plant, a DeLaval-Bird continuous centrifugal meal recovery machine; also DeLaval Ac-VO fish oil separators, etc. The cookers and presses were re-built by Standard Steel Corporation.

Another noteworthy fish reduction plant, not completed at the end of 1952 was at the San Diego plant of Westgate-Sun Harbor Company. Moving its entire tuna-packing plant to a new location, the company there planned to install sardine and mackerel-packing machinery in 1953.

In connection with increased fish offal, the company transferred its reduction and stickwater system to a new building adjacent to the cannery.

There, during 1953, as a result of considerable experimentation the company will probably offer a quite new product recruited from stickwater.

Reduction of sardine and mackerel at the plant of Pesquera del Pacifico, S.A. 70 miles below the international border from San Diego, with much of the annual production of meal and oil crossing into this country, was severely curtailed in 1952 due to an acute shortage of raw material. It was estimated the production was less than 50% of 1951.

Technological advances were handicapped in 1952 by the adverse market situation existing throughout that year for fish by-products, notably oil, but also including meal and solubles to some extent.

Research continues to indicate special feeding values in fish products. On this may depend market recovery.

NORTH PACIFIC WHALING

AN active but generally unprofitable year was experienced by whaling in the North Pacific in 1952.

B. C. Packers, Ltd., of Vancouver, B. C., was the only organization operating a fleet off the west coast. Its vessels made a kill of 451 whales—a record for the company numerically—but many of the whales were disappointingly low in oil content, and the market for whale products continued in a slump.

Although a high level of efficiency has been attained at the company's main shore station, Coal Harbor, on Quatsino Sound, where the whales are processed, the over-all operation remains a marginal one in an economic sense, dependent on costs and the prices to be obtained for the output.

At the beginning of the season officials of B. C. Packers, Ltd., made it clear that they were not particularly eager to resume whaling in 1952 owing to market conditions, but

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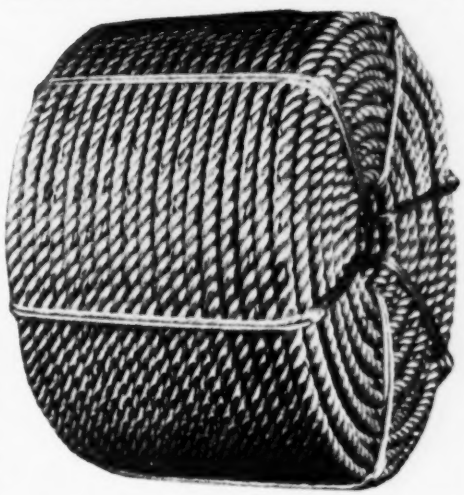
DESIGNED for the FISHERMAN



Trained sales representatives working "on the spot" with fishermen and fishing supplies distributors, keep American Manufacturing Company constantly up to date on the cordage requirements of the fishing industry. As a result, "AMERICAN BRAND" Fisherman's Cordage is built the way fishermen want it. "AMERICAN BRAND" Manila, Sisal and Nylon ropes can always be counted on to give the very best service under all conditions. Specify "AMERICAN BRAND" when you order trawl lines, net lines, boat lines, pot warp, marline and oakum.

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Sales Offices:
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California Sardine Oil Yield Per Ton

SEASON	(Gallons Oil per ton of fish) SAN FRANCISCO District	MONTEREY District	SAN PEDRO District	SAN DIEGO District	SEASON
1930-31	47.5	43.2	26.3	....	1930-31
1931-32	47.1	43.1	28.5	....	1931-32
1932-33	43.0	45.6	29.1	....	1932-33
1933-34	39.6	37.0	31.3	17.7	1933-34
1934-35	41.7	44.5	30.7	24.7	1934-35
1935-36	49.9	46.8	27.9	21.0	1935-36
1936-37	41.3	39.1	18.9	17.9	1936-37
1937-38	36.3	36.6	19.3	11.1	1937-38
1938-39	40.2	35.6	19.8	13.4	1938-39
1939-40	45.5	38.7	15.5	5.0	1939-40
1940-41	43.8	38.6	18.7	18.3	1940-41
1941-42	43.8	38.2	21.9	16.7	1941-42
1942-43	42.4	38.0	19.9	14.7	1942-43
1943-44	43.5	38.0	20.7	18.9	1943-44
1944-45	45.0	43.4	27.4	16.3	1944-45
1945-46	49.7	43.0	24.0	21.5	1945-46
1946-47	24.3	36.5	24.5	19.9	1946-47
1947-48	17.8	23.7	23.9	32.1	1947-48
1948-49	18.7	27.4	20.8	25.9	1948-49
1949-50	38.4	37.0	21.7	22.4	1949-50
1950-51	41.1	33.1	25.7	27.2	1950-51
1951-52	30.1	25.1	21.2	17.6	1951-52

rather than see plant and men idle they would carry on at approximately the same labor rates as prevailed in 1951. What the situation may be in May, 1953, when the company decides whether or not to continue its whaling operation remains to be seen.

The Coal Harbor plant produces sperm oil, for which there has been little demand in recent years, and baleen oil; meal, solubles, and Vitamin A from whale livers, the latter being a relatively new product. So far as complete utilization of the raw material is concerned, Coal Harbor is probably in a class by itself.

Figures for whale oil production in 1952 are not available, but in 1951 British Columbia's whaling industry produced 3,413,947 pounds of whale oil and 1,956,277 pounds of sperm oil.

B. C. Packers operated five vessels out of Coal Harbor last season, most of them specially designed for that fishery and previously engaged in the Antarctic and Labrador grounds.

Salmon, Dams and Turbines

PROGRESS in rehabilitation of the Sockeye salmon resource of the Fraser River, complicated by the problem arising from industrial diversion of some of the headquarters of that great Canadian river, in 1952 brought into bold relief some of the fundamental aspects of science and industry as they impinge upon the world's food fish resources.

The year provided further evidence of the sound success attending the international enterprise in which Canada and the United States cooperate for the rebuilding of the Fraser's Sockeye runs.

At the same time, in 1952 industrialization of British Columbia reached out to impair one of the great headwater rivers of the Fraser, when much of the flow of the Nechako was diverted into the power system which will supply the Nitinat project of the Aluminum Company of Canada.

Thus Canada is faced—as the Pacific states have been faced for years—with the problem of how rivers may produce fish, and at the same time be used for power and irrigation.

Successful solution of this problem requires breadth of vision, scientific and technological study, and the willingness to make additional investment in order to reap a vastly greater return, whether in fish or in power.

That salmon resources can be restored and maintained in the Fraser system no longer is subject to doubt.

The record is written in scientific fact.

It promises one of the richest of all Canadian potentials.

Interesting to biologists as well as to others who are concerned with the rehabilitation of the Fraser's fisheries was the fact that 6,800 Jacks were counted in the Horsefly River, once the major part of the great Quesnel spawning system. In 1913 the Quesnel run alone was worth $30,000,000 at today's prices. This Jack run combined with the indicated rate of rehabilitation in other areas gives rise to confidence that more than 300,000 Quesnel Sockeyes will return to the fishing waters in 1953, and it is hoped that 100,000 might escape to the spawning grounds. If this materializes, Quesnel should then contribute a major part of this cycle's catch beginning in 1957.

Total catch of Sockeye in 1952 in waters controlled by the Commission was 2,260,000 fish, an increase of 420,000 or 23% over 1948, the previous cycle year. Canadian fishermen accounted for 1,155,000 fish, U. S. fishermen, 1,105,000. The catch in 1944 was 1,440,000; in 1940, 1,690,000. Total pack of Sockeye on the Fraser was 117,000 Canadian and 115,000 American cases—an increase of 80,000 cases over 1948, or 52%.

It is estimated that the total Sockeye run to the Fraser during the past season was 3,170,000 fish, the escapement being 830,000, or 26%, and the Indian catch 80,000 fish, or 2%.

Nylon Nets Largely Used

It was a good year for gillnets in U. S. waters, chiefly due to rehabilitation of the early runs. Gillnets continue to increase in numbers, and there has been a trend in the past three years towards use of nylon nets which formed about 50% of the gear last season. Actually, 172 gillnets were in operation in U. S. convention waters, July 28-30, compared with 151 the previous cycle year and 55 in 1944. There were 222 purse seines in use last July 28, 29, 30, compared with 195 in 1948, and 67 reef nets, compared with 87 four years before.

The slide on the Babine River, one of the important contributors to the Skeena salmon fishery, caused major concern after it was discovered in the late summer of 1951, but prompt measures were taken to restore the stream through removal of obstructions, and it is hoped that the passage for spawners will be clear for the coming run without the necessity of building fishways, as at Hell's Gate.

Industrial Development Peril for Fisheries

Threatened interference with the spawning areas resulting from waterpower development continued to cause some anxiety during the past year. The industry realizes that hydro expansion is inevitable, but it hopes that in its planning there will be adequate co-operation at engineering levels between power and fisheries interests to insure that the two interests may advance harmoniously. It was too early to determine whether damming of the Nechako system in connection with the Kitimat aluminum project would adversely affect the Stuart runs by changing river levels and water temperature. Prospects of a natural gas pipeline from Peace River through the interior of the province offered some hope that the Cariboo district would turn to gas as power rather than press for hydro-electric development on the Quesnel. In some quarters there was a revival of discussion of power dams on the main body of the Fraser, such as at Moran. The situation was one that called for continuing vigilance on the part of the salmon industry.

Tuna technology peaked in 1952 in the completion and commissioning of the great packing plant pictured above—the "Star-Kist No. 4" cannery of the French Sardine Co. at Terminal Island, Calif., America's ranking fish port in point of tonnage.

The Cannery of the Year

STAR-KIST No. 4, pictured above, in 1952 established a new standard for fish packing plants. Property of French Sardine Co., it is located on filled ground at the entrance to Fish Harbor at Terminal Island, Calif., the center of Los Angeles Harbor which is America's greatest concentration of fish plants.

The new cannery is new in every aspect. The very site was designed and dredged as part of the whole. To fish packing it brings the concept that a fish cannery can compare on equal terms with the finest food-packing establishments of any kind.

No technological departures save those of refinement and perfected mechanization are incorporated in Star-Kist No. 4. The process used is that worked-out over the years for tuna, but the means by which the process is applied reflect the results of studious analysis of how modern mechanization can produce perfection while reducing costs.

Space as well as speed, and simplicity as well as science are used in Star-Kist No. 4 to achieve the peak in tuna packing. Capacity of the plant is 350 tons of tuna per shift. The preparation room contains eight lines of special design, with all tuna moving on stainless steel belts—more than five miles of them in this single room.

All cans are filled by automatic machinery, and are sealed for processing on 16 high-speed Continental Can Co. closing machines.

The entire packing plant covers 4.5 acres—all under one roof. The building was constructed by the tip-up concrete slab method. Process cooking is done in an open retort room—which is not a room—having only a roof, with screened walls for ventilation and sanitation.

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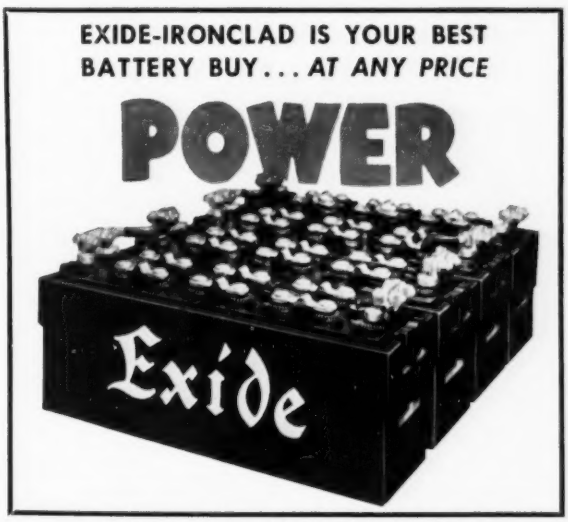

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